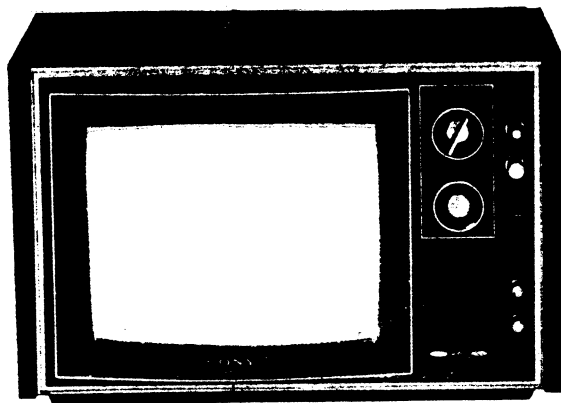


# KV-1300E

Chassis No.    Serial No.  
 SCC-22A-A    Up to 25,000  
 SCC-22A-B  
 SCC-22A-C    25,001 and later

This manual contains the  
 Supplement No. 1.



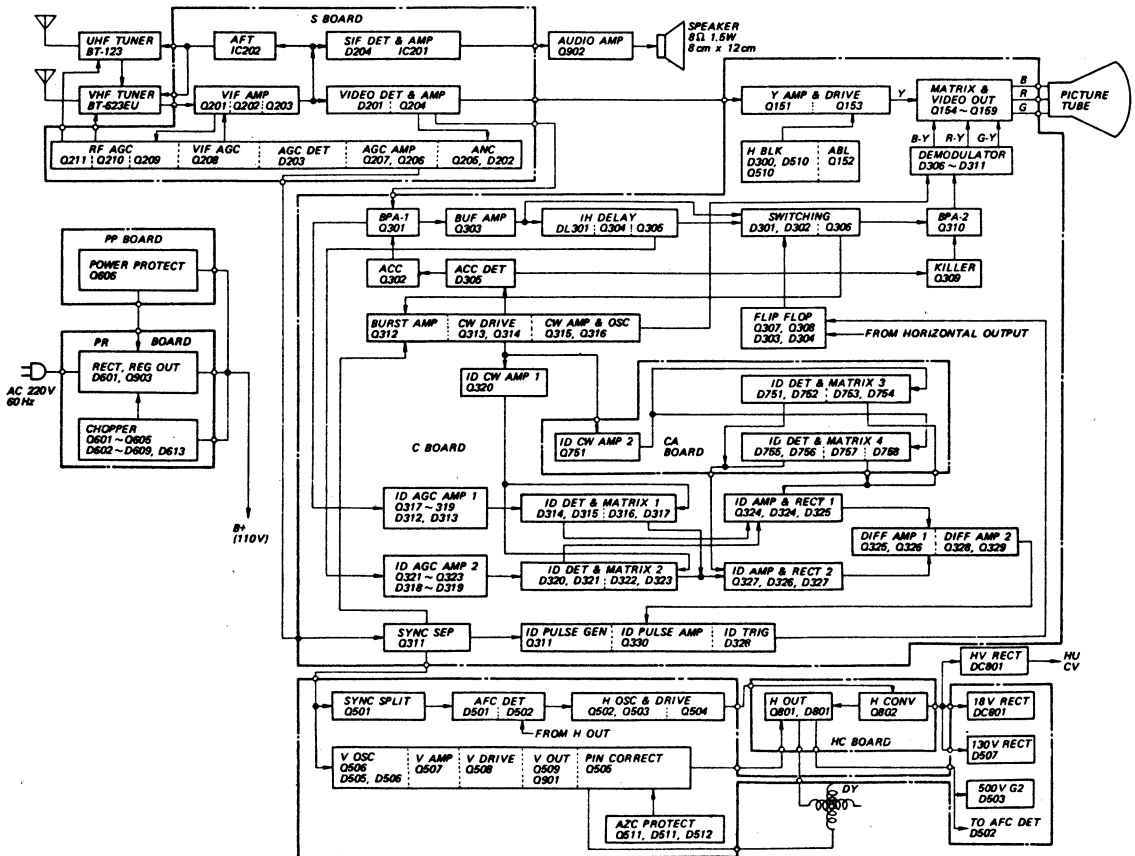
**TRINITRON®**  
**COLOUR TV**

## SPECIFICATIONS

<b>TV-signal standards:</b>	CCIR system B and G	<b>Power requirements:</b>	AC 220V 50 Hz
<b>Picture tube:</b>	13" 90° deflection TRINITRON system (330 AB22)	<b>Power consumption:</b>	78 watts
<b>Semiconductors:</b>	79 transistors, 68 diodes, 2 ICs, 3 thermistors, 2 varistors and 1 posistor	<b>Anode voltage:</b>	20 kV at zero beam current
<b>Channel coverage:</b>	VHF; ch. E2 ~ E12 UHF; ch. E21 ~ E68	<b>Automatic controls:</b>	ACC (automatic color control) ACK (automatic color killer) ADG (automatic degaussing) ABL (automatic brightness limiter) ANC (automatic noise canceller) AFC (automatic frequency control) AFT (automatic fine tuning) AGC (automatic gain control) AVR (automatic voltage regulator) AZC (automatic zooming control)
<b>Aerial system:</b>	240-ohm aerial terminal type	<b>Dimensions:</b>	474 mm(W) x 318 mm(H) x 394 mm(D)
<b>IF circuit:</b>	3 stages with 1 double tuned and 3 single tuned elements	<b>Weight:</b>	14.1 kg
<b>Intermediate frequency:</b>	Picture i-f carrier; 38.9 MHz Sound i-f carrier; 33.4 MHz	<b>Accessories:</b>	Polishing cloth Instruction manual etc.
<b>Video system:</b>	Red, green and blue cathode drive system		
<b>Sound system:</b>	5.5 MHz intercarrier system Power output; 1.2 watts (at 10% harmonic distortion) Speaker; 8 x 12 cm, 8-ohm voice coil		
<b>Convergence correction system:</b>	Horizontal; electrostatic deflection system Vertical; magnetism correction system of magnet		

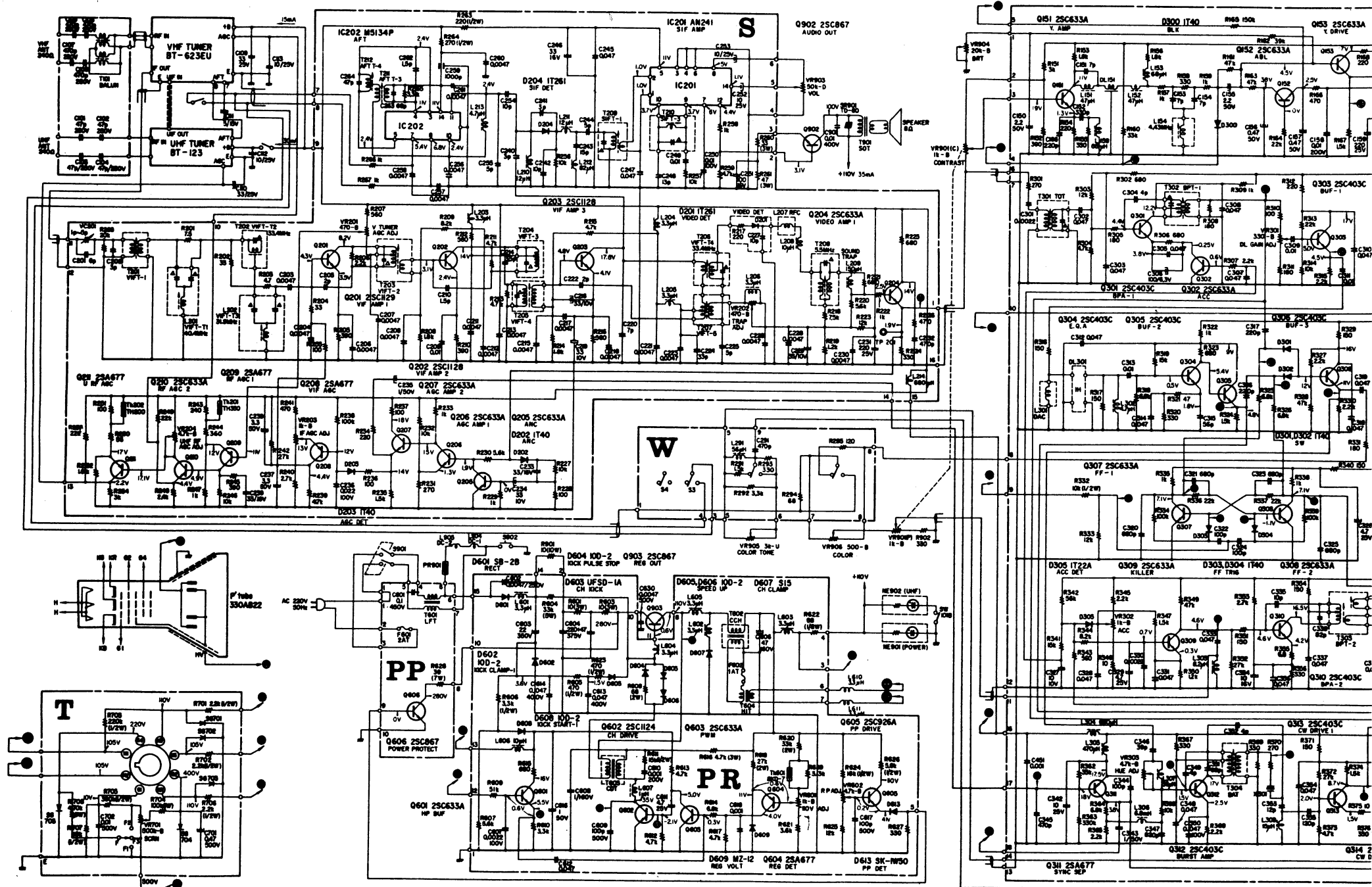
# OUTLINE

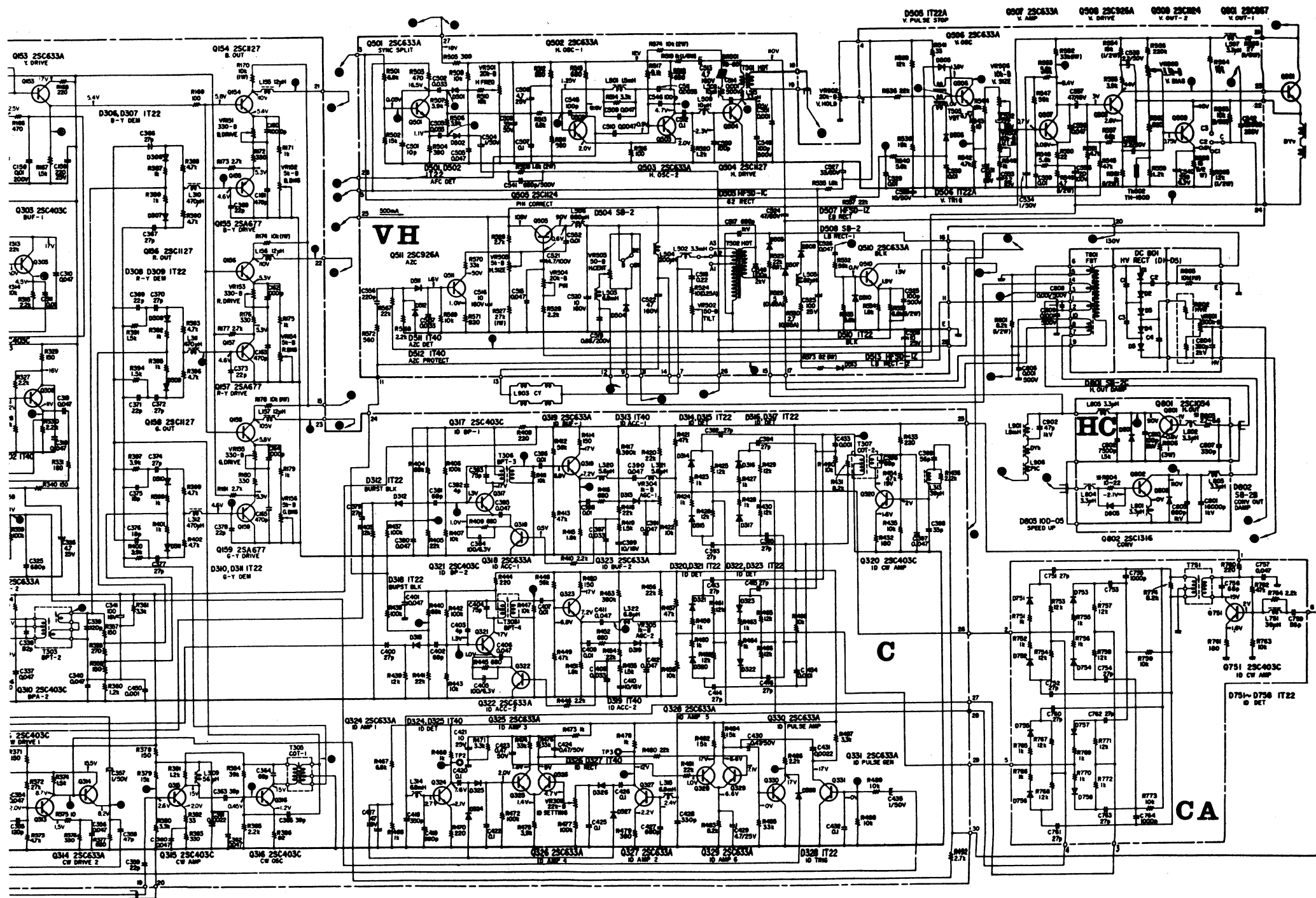
## BLOCK DIAGRAM



### SCHEMATIC DIAGRAM

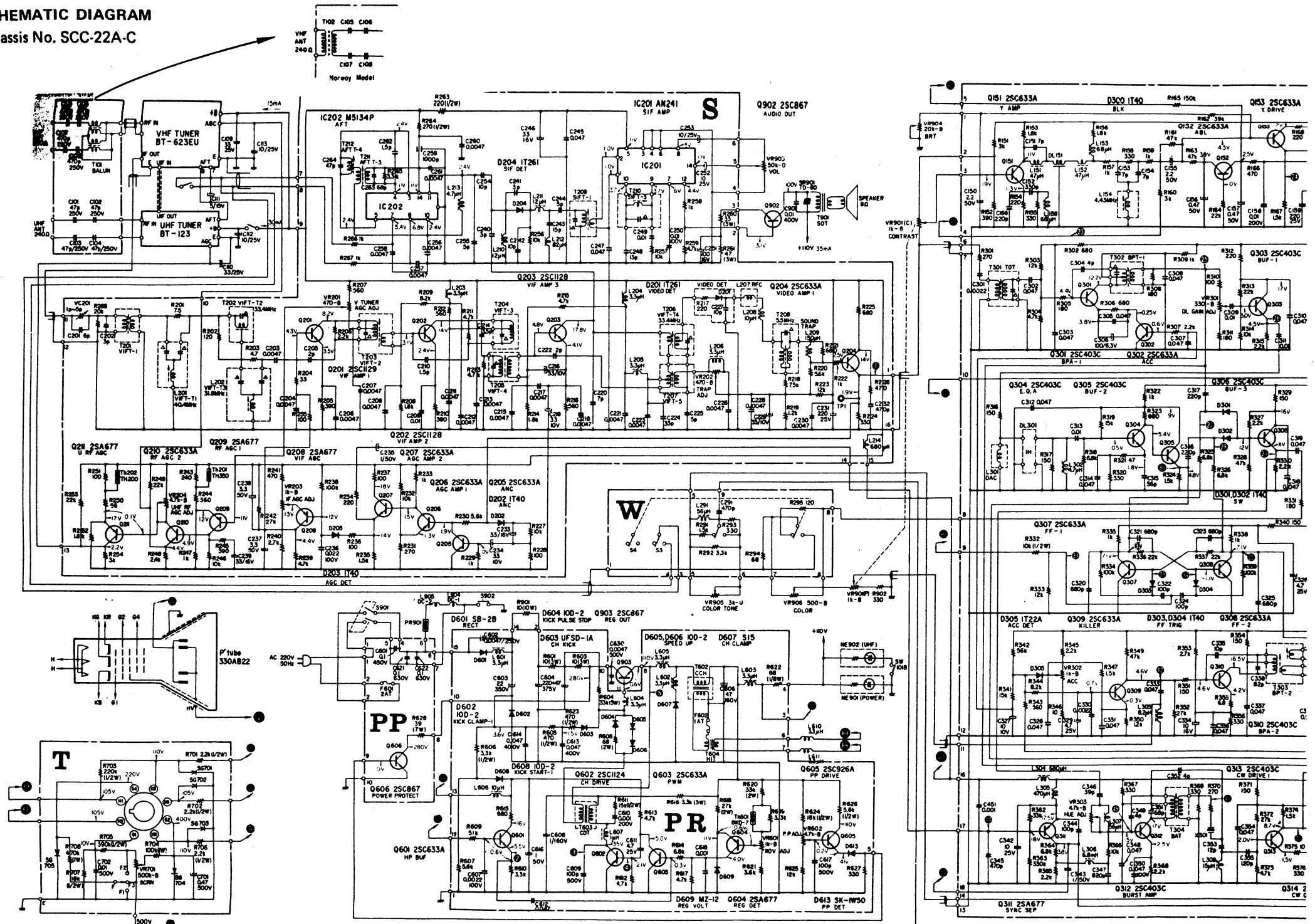
**Chassis No. SCC-22A-A, SCC-22A-B**

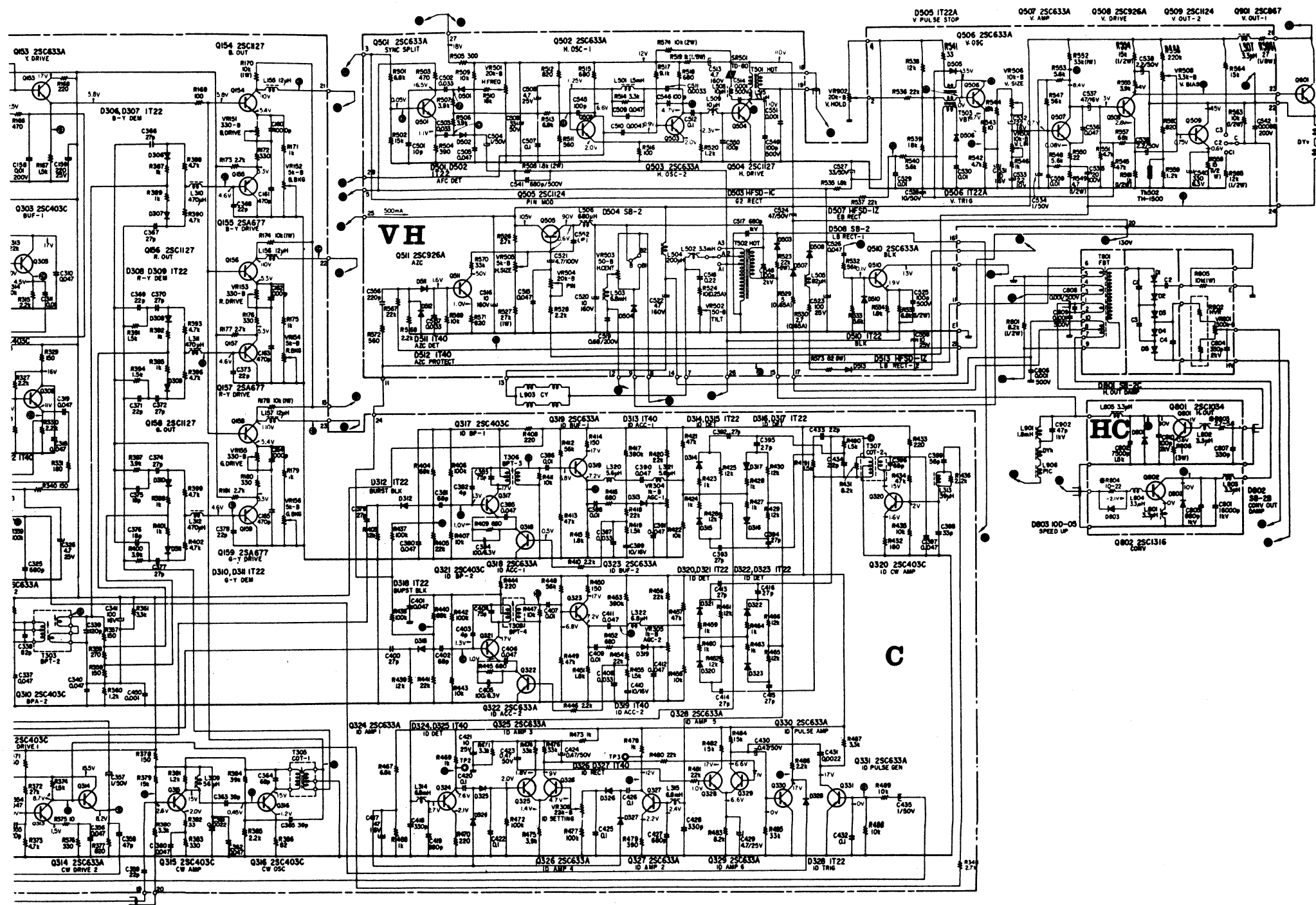


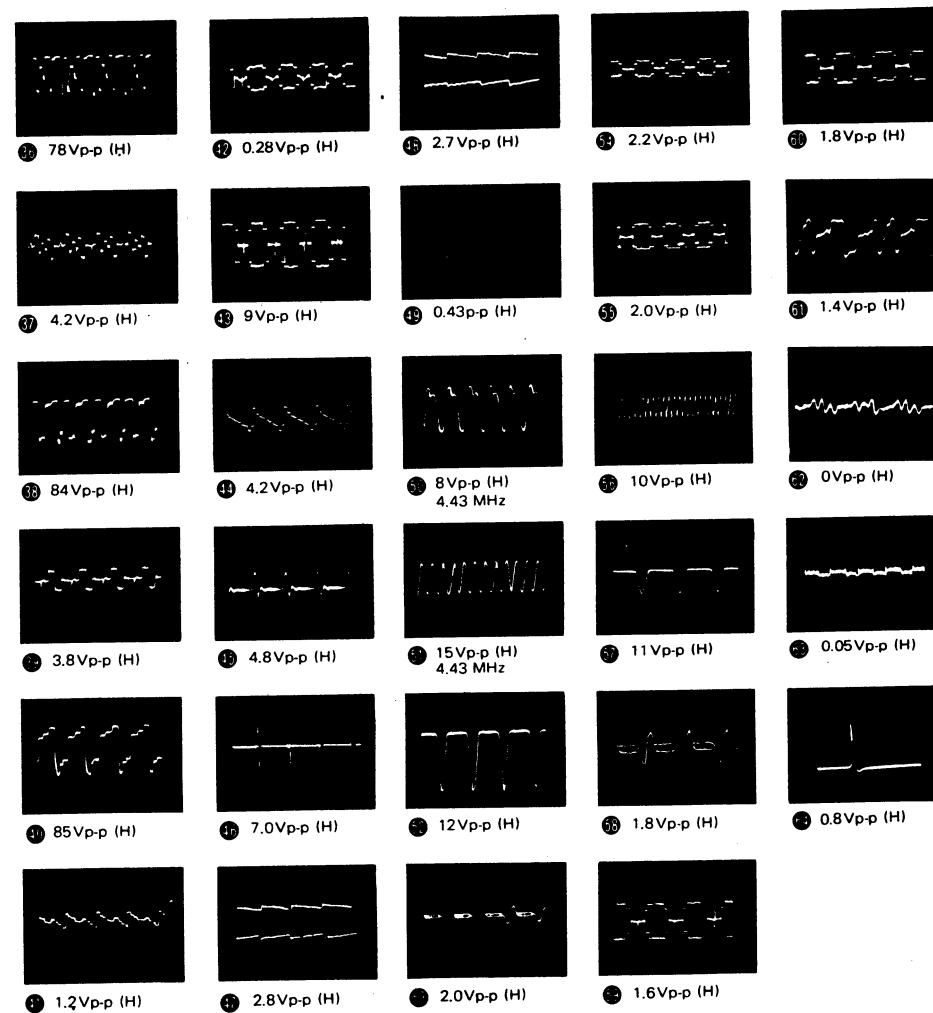
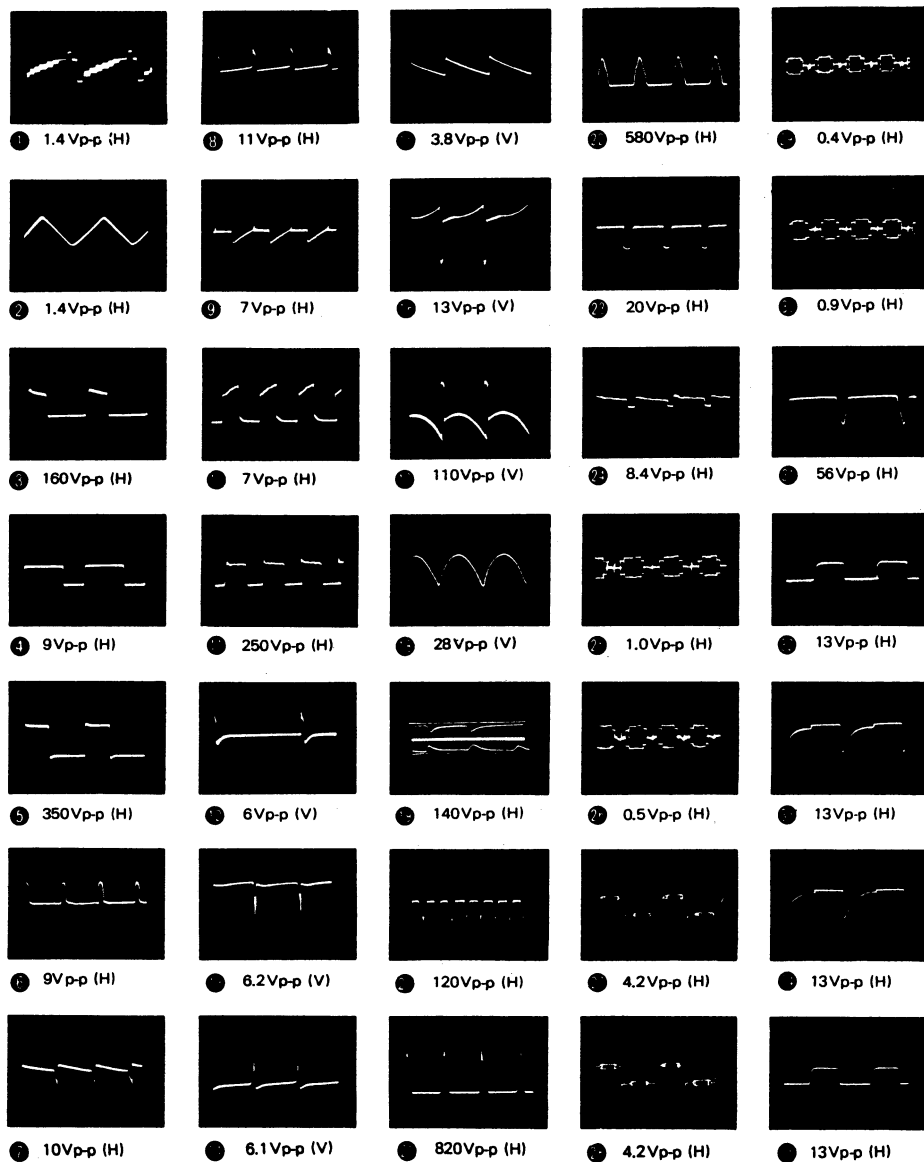


# SCHEMATIC DIAGRAM

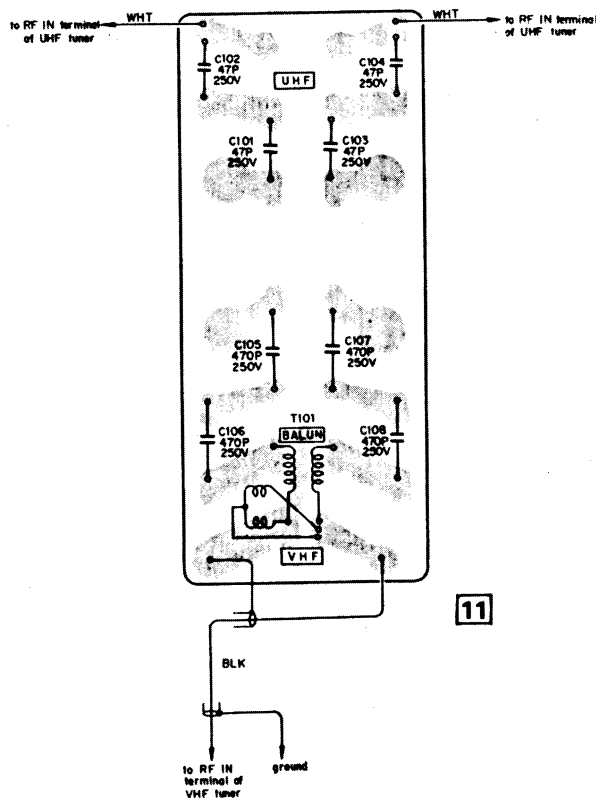
Chassis No. SCC-22A-C



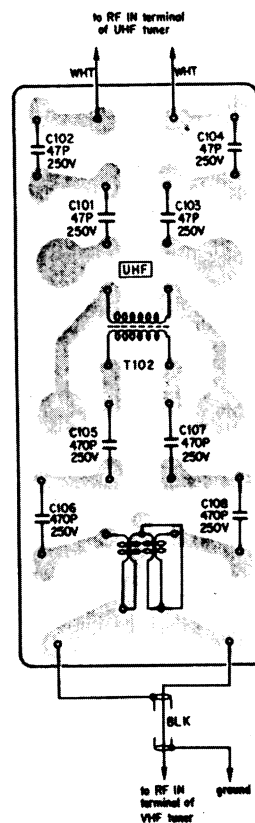




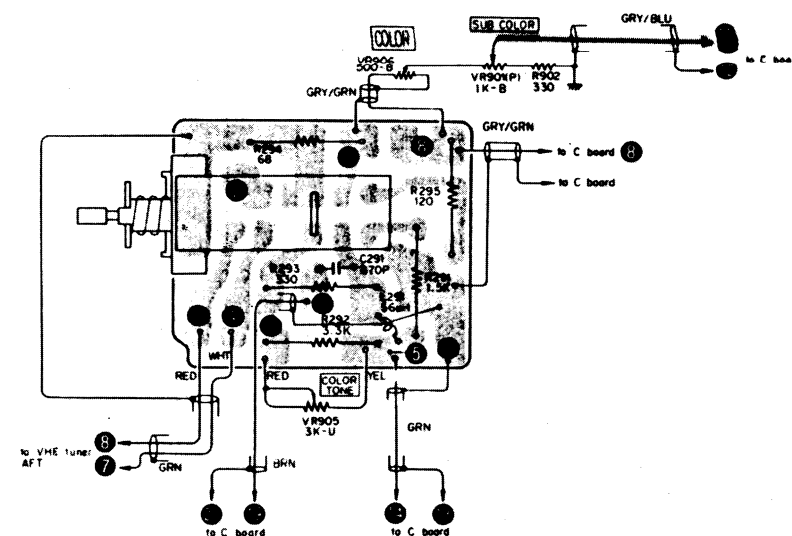
## ANT CIRCUIT BOARD



— Norway model only —



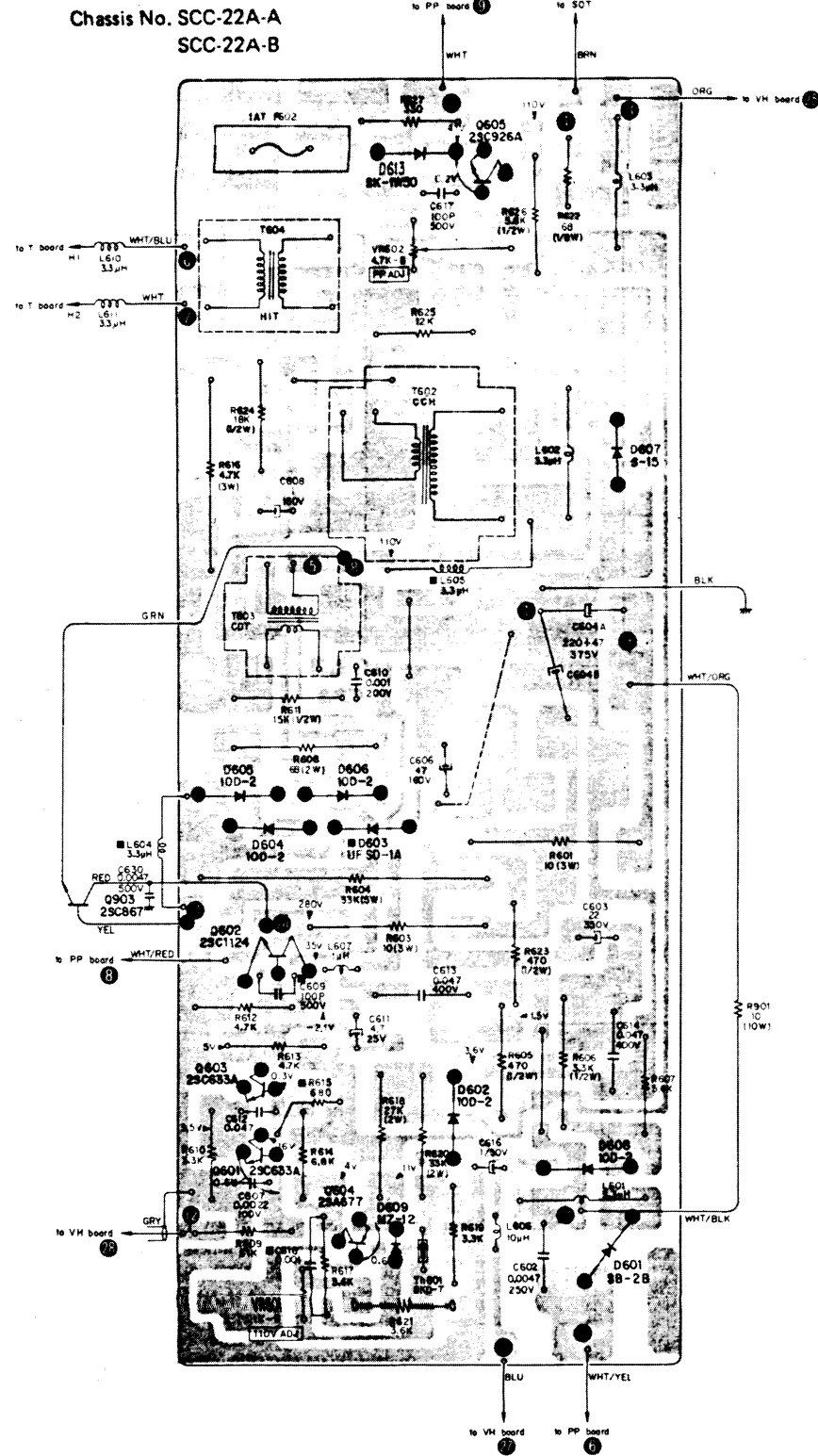
### W CIRCUIT BOARD



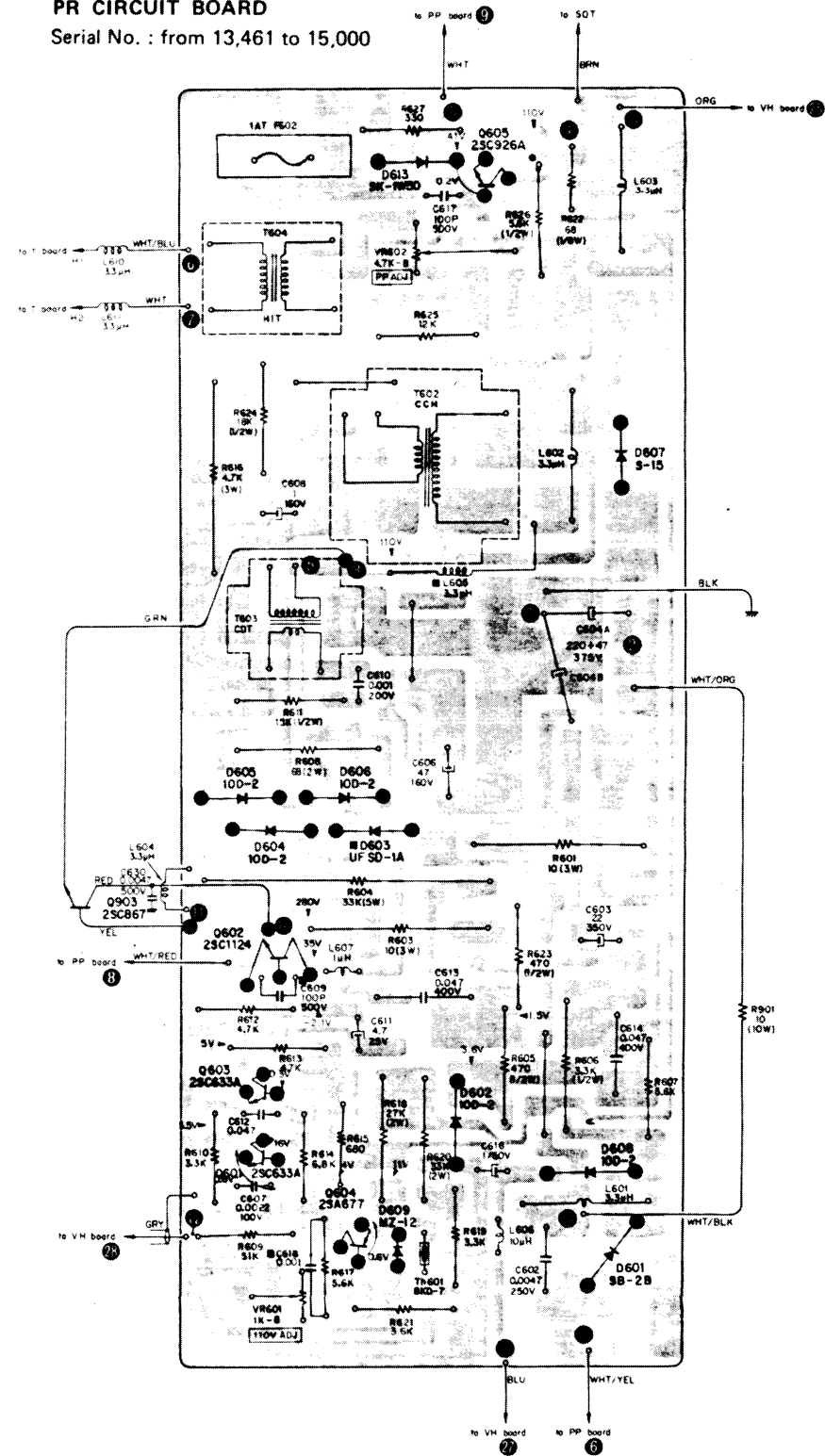
- Note:**
1. All capacitors are 50WV unless otherwise specified.
  2. All resistors are 1/4W unless otherwise specified.
  3. All resistance values are in ohms. k = 1,000.
  4. All capacitance values are in  $\mu\text{F}$ , except as indicated with p, which means  $\mu\text{F}$ .
  5. Voltages measured from chassis to point indicated with a VOM (DC 20 k ohms/V) at color signal input.
  6. The parts marked \* indicates a component whose value is selected to yield specified operating condition.
  7. The blue circled numbers ( ● ~ ⊙ ) refer to waveform on page 51 and 52.



PR CIRCUIT BOARD  
Chassis No. SCC-22A-A  
SCC-22A-B



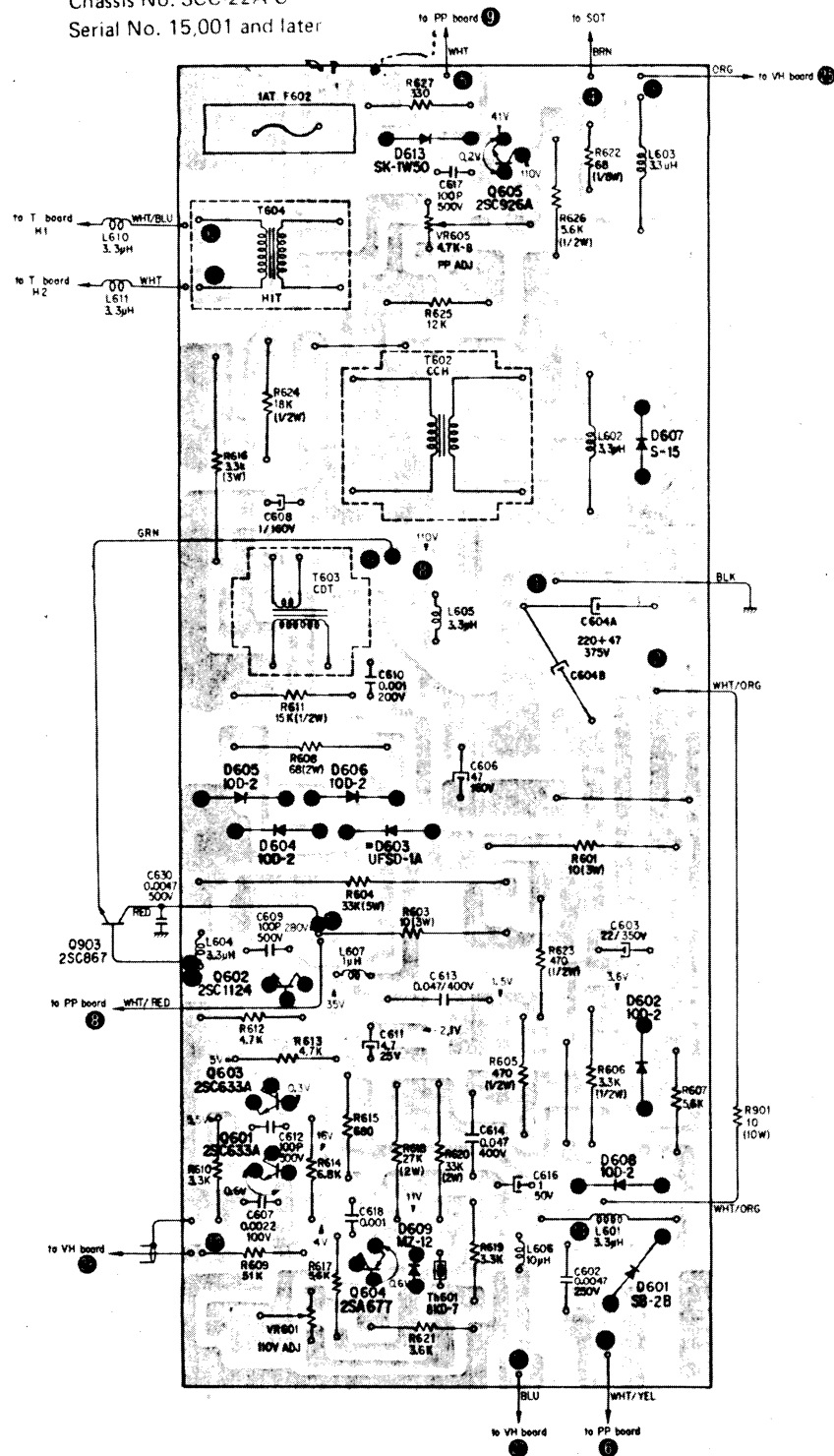
PR CIRCUIT BOARD  
Serial No. : from 13,461 to 15,000



# PR CIRCUIT BOARD

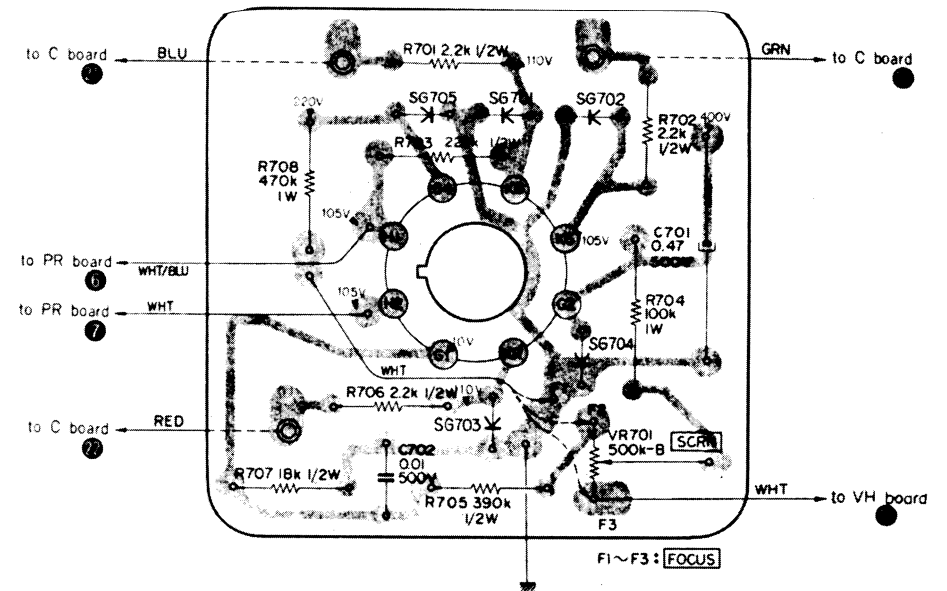
Chassis No. SCC 22A C

Serial No. 15,001 and later



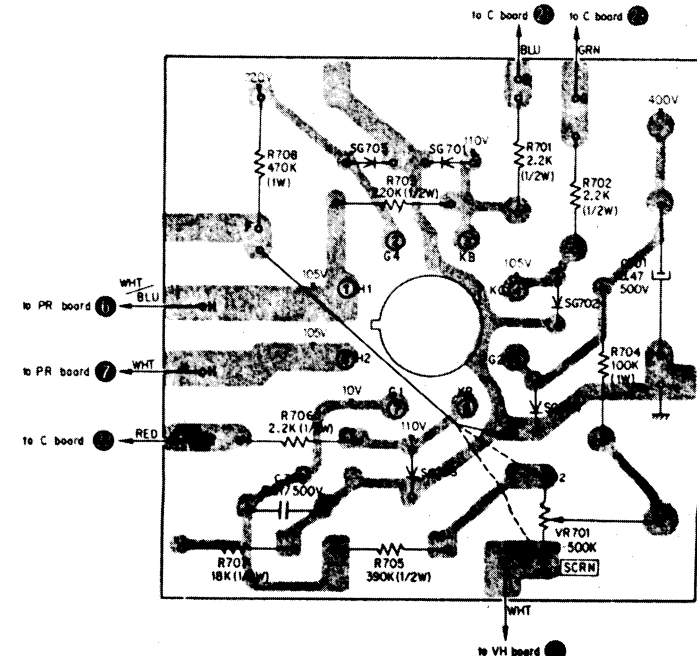
# T CIRCUIT BOARD

Applicable serial No. up to 19,000



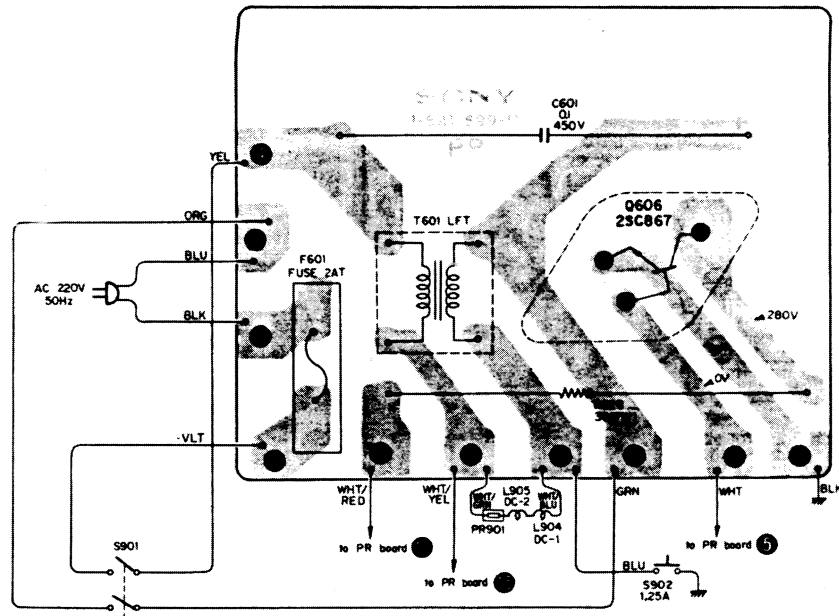
# T CIRCUIT BOARD

Applicable serial No. 19,001 and later



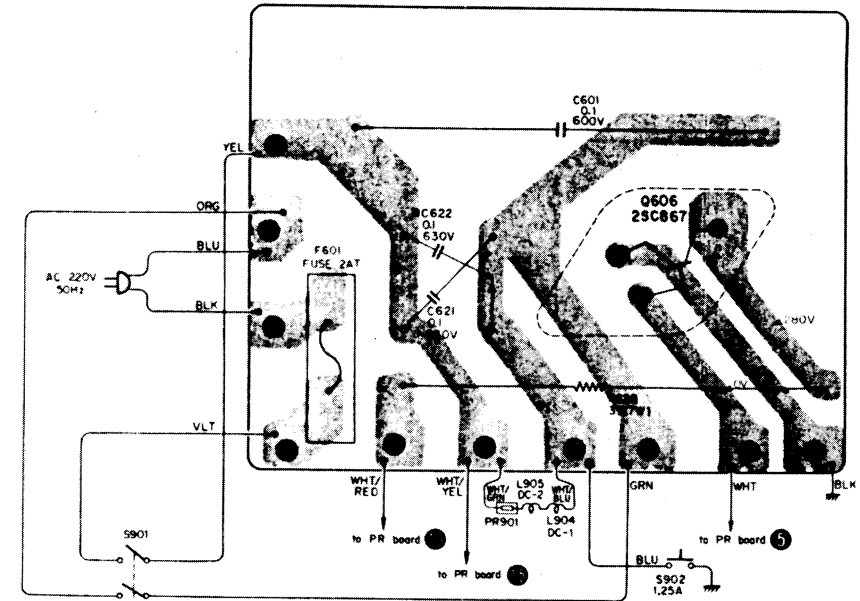
## PP CIRCUIT BOARD

Serial No. Up to 14,000



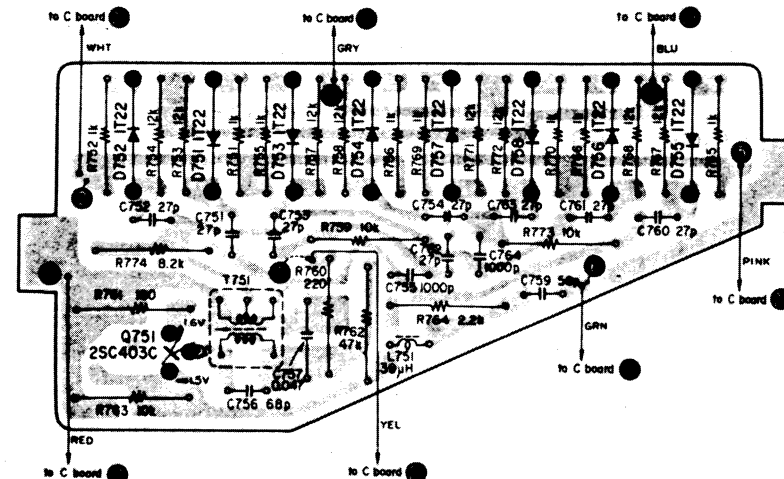
## PP CIRCUIT BOARD

Serial No. : from 14,001 to 15,000



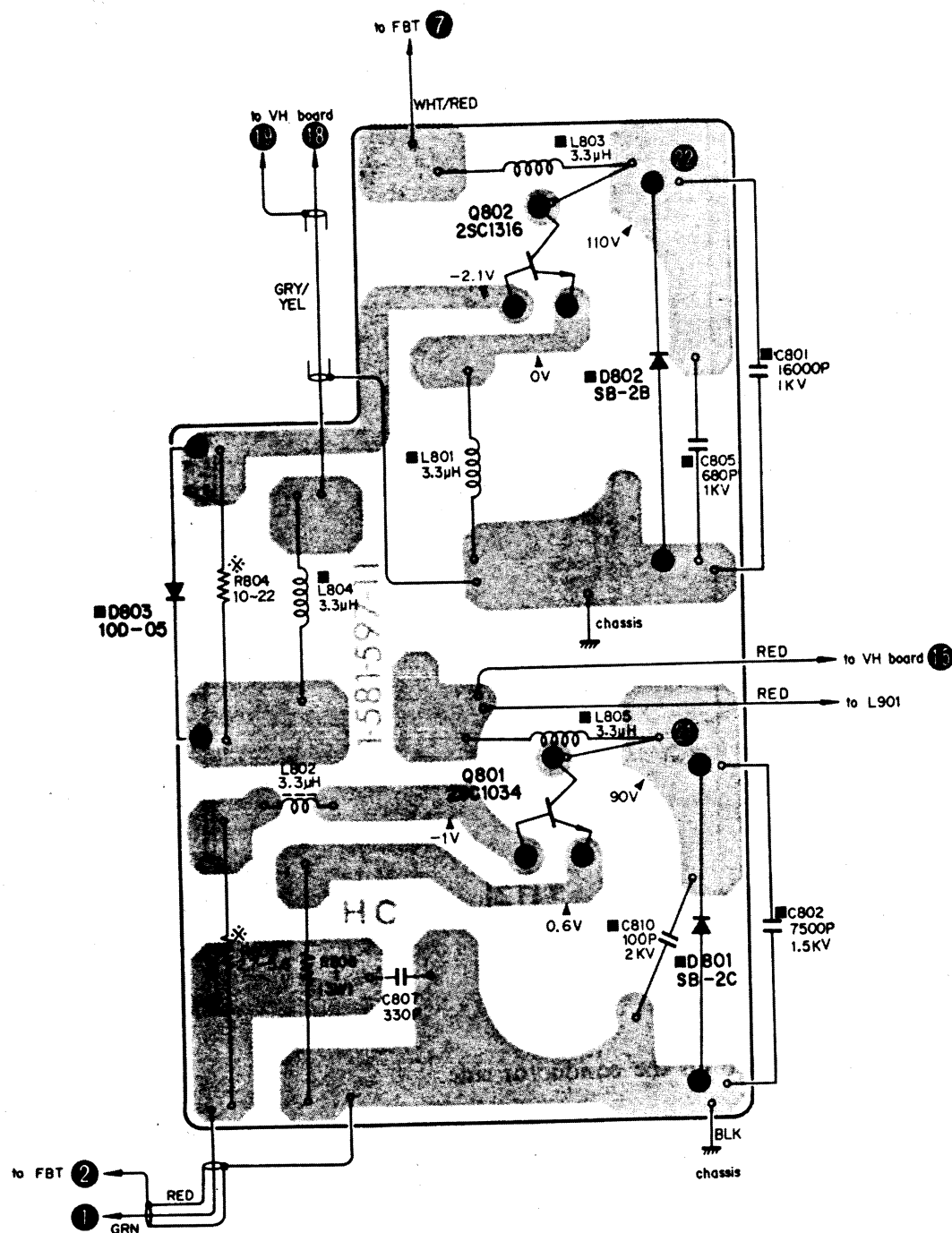
## CA CIRCUIT BOARD

Chassis No. SCC-22A-A, SCC-22A-B



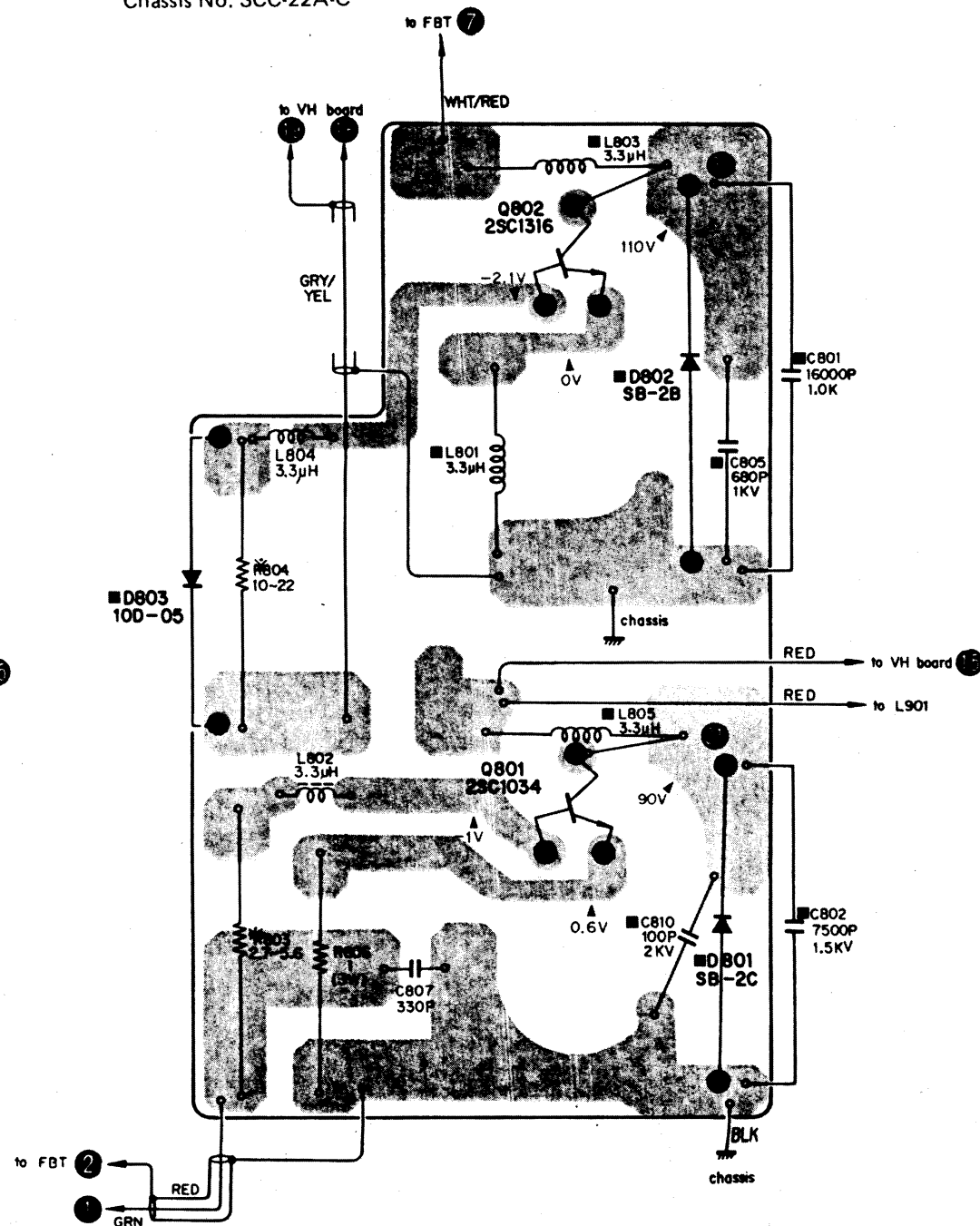
# HC CIRCUIT BOARD

Chassis No. SCC-22A-A, SCC-22A-B



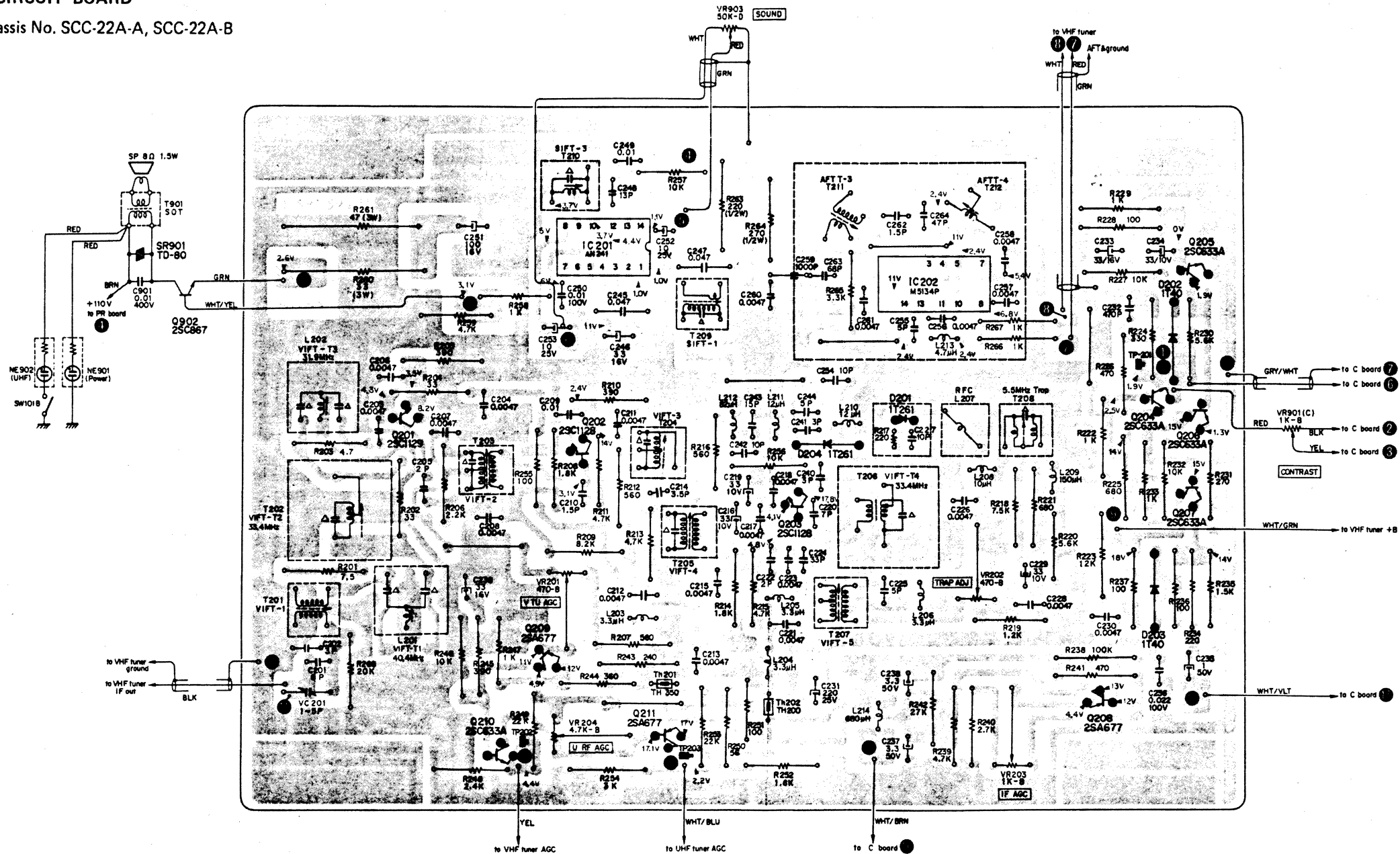
# HC CIRCUIT BOARD

Chassis No. SCC-22A-C



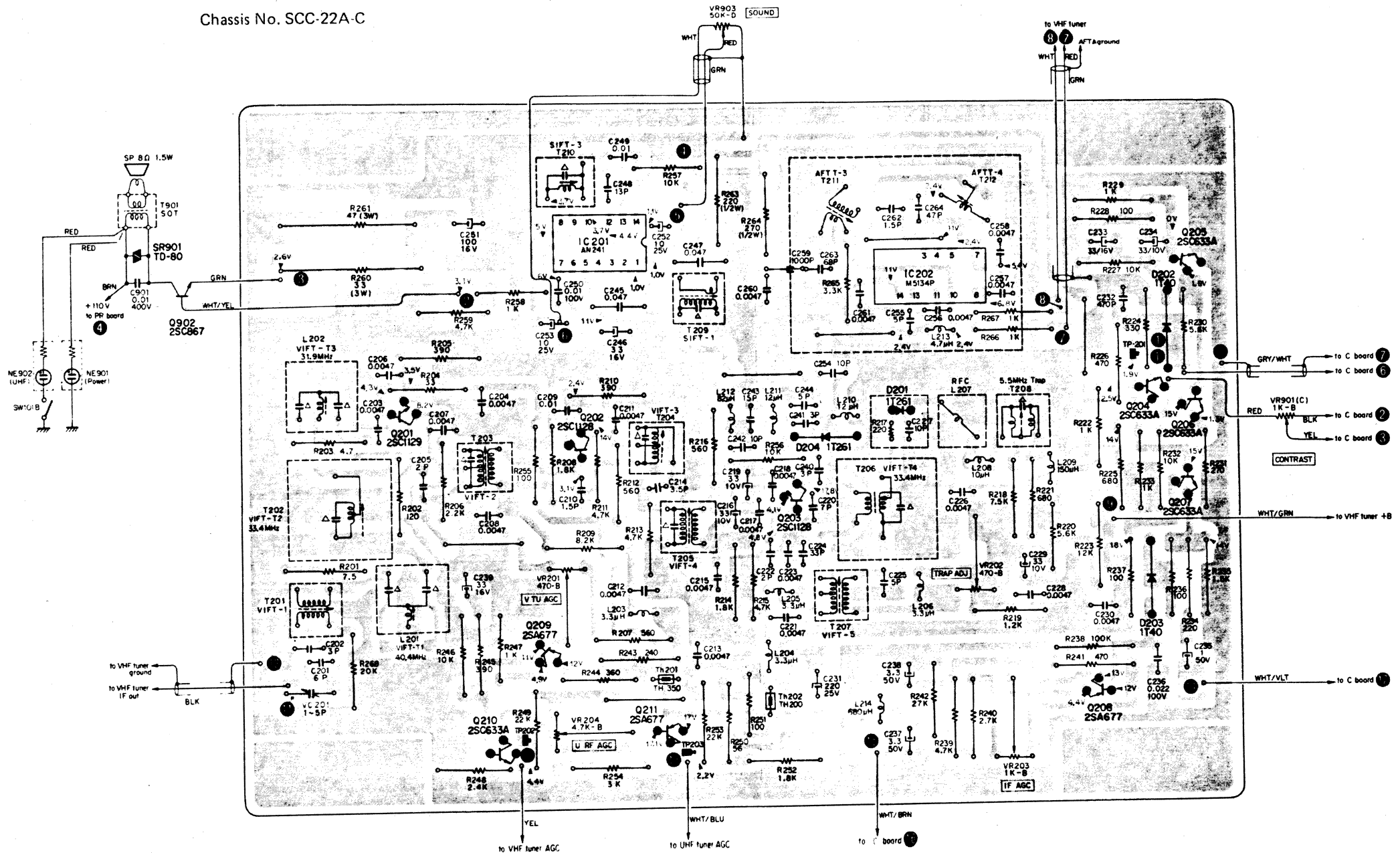
Chassis No. SCC-22A-A, SCC-22A-B

Chassis No. SCC-22A-A, SCC-22A-B



# S CIRCUIT BOARD

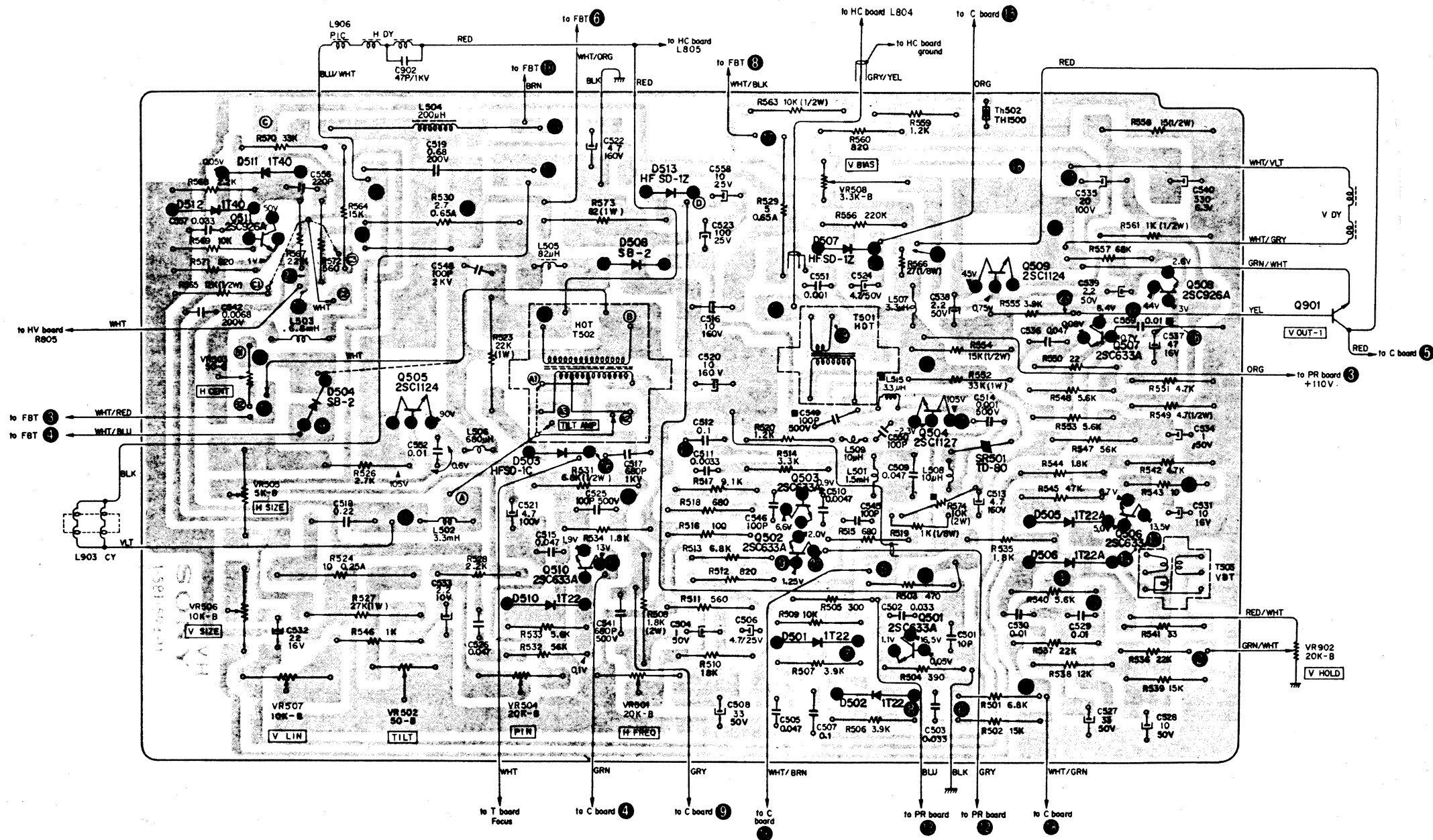
Chassis No. SCC-22A-C



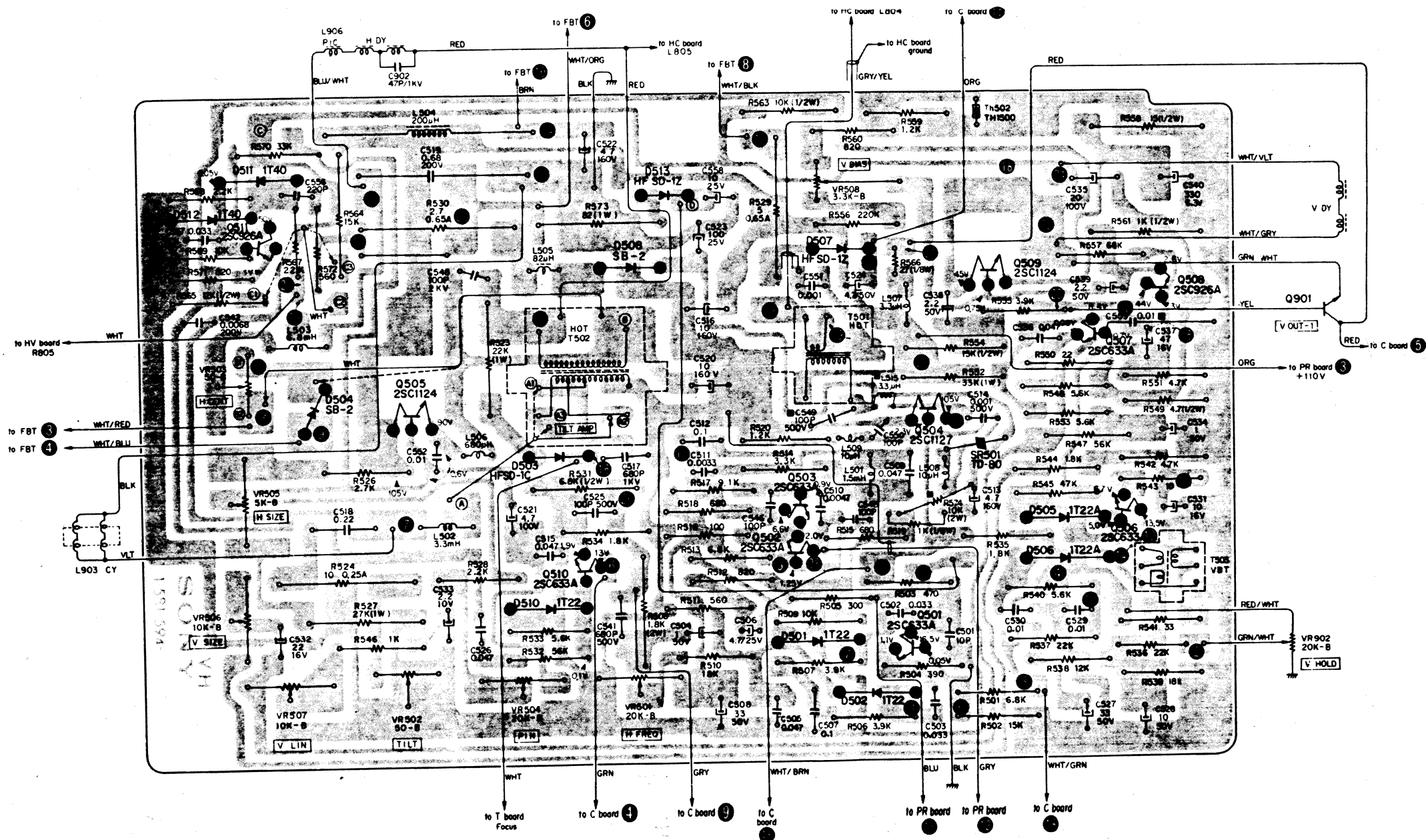


# VH CIRCUIT BOARD

Chassis No. SCC-22A-A, SCC-22A-B



Chassis No. SCC-22A-C

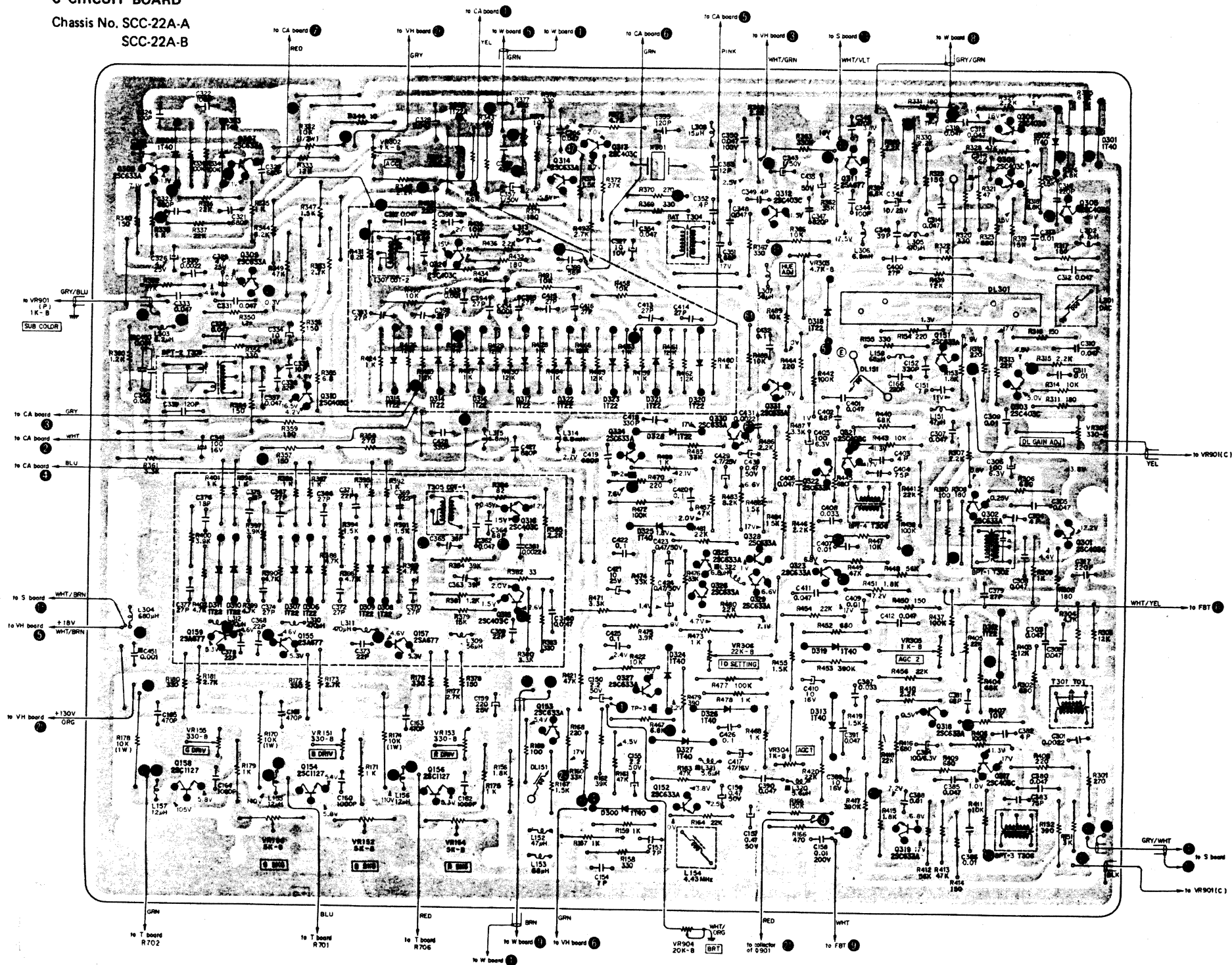




# C CIRCUIT BOARD

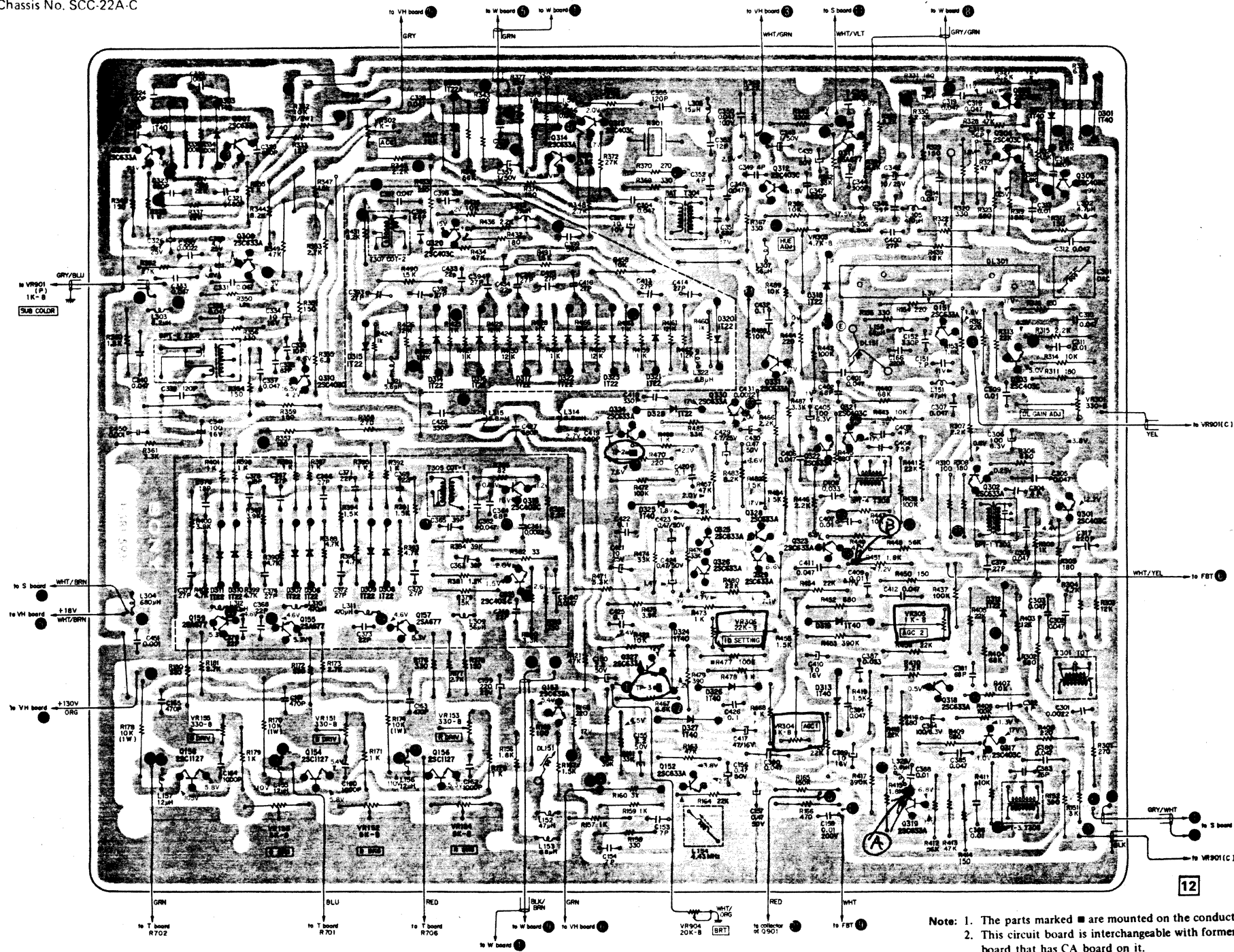
Chassis No. SCC-22A-A

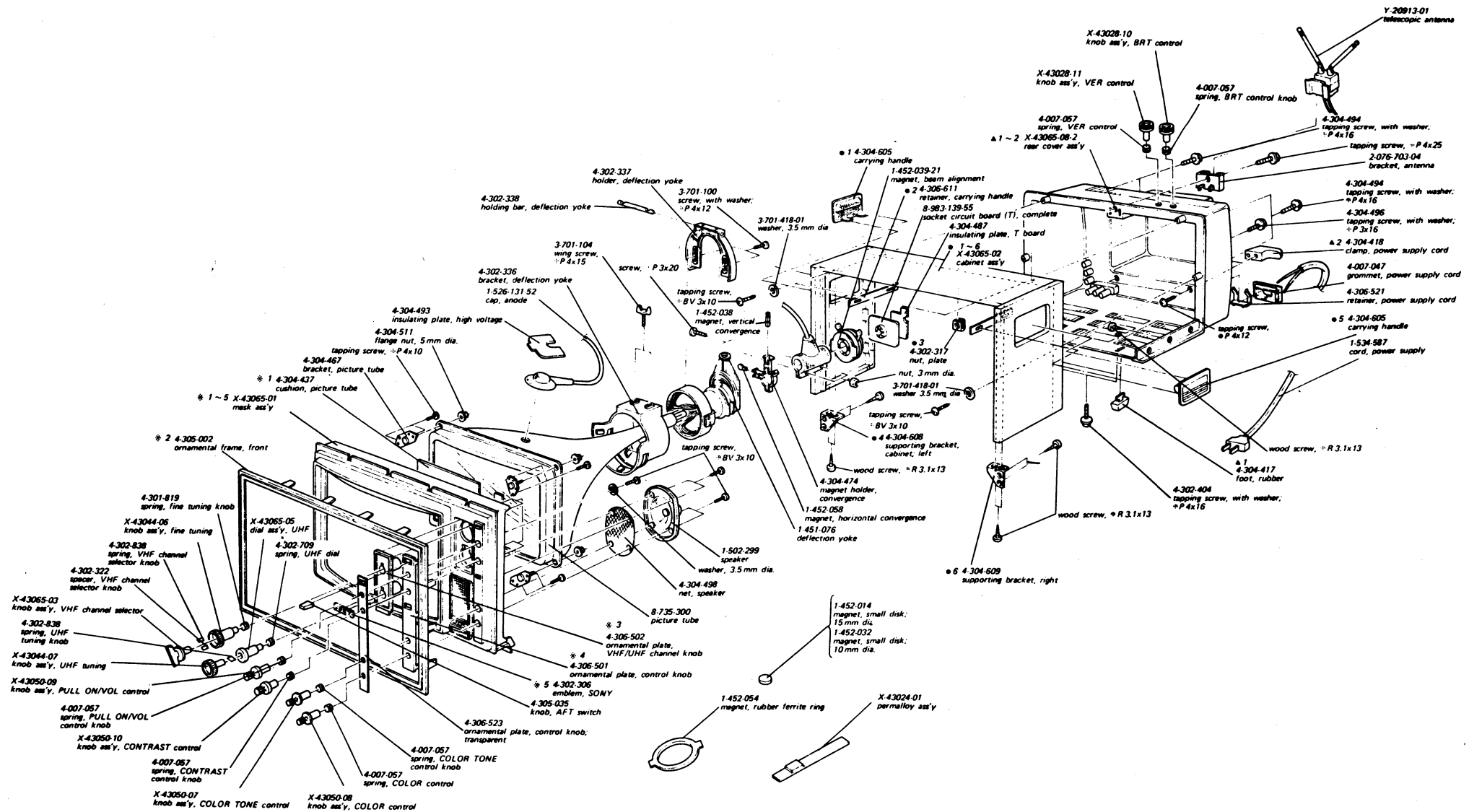
SCC-22A-B



# C CIRCUIT BOARD

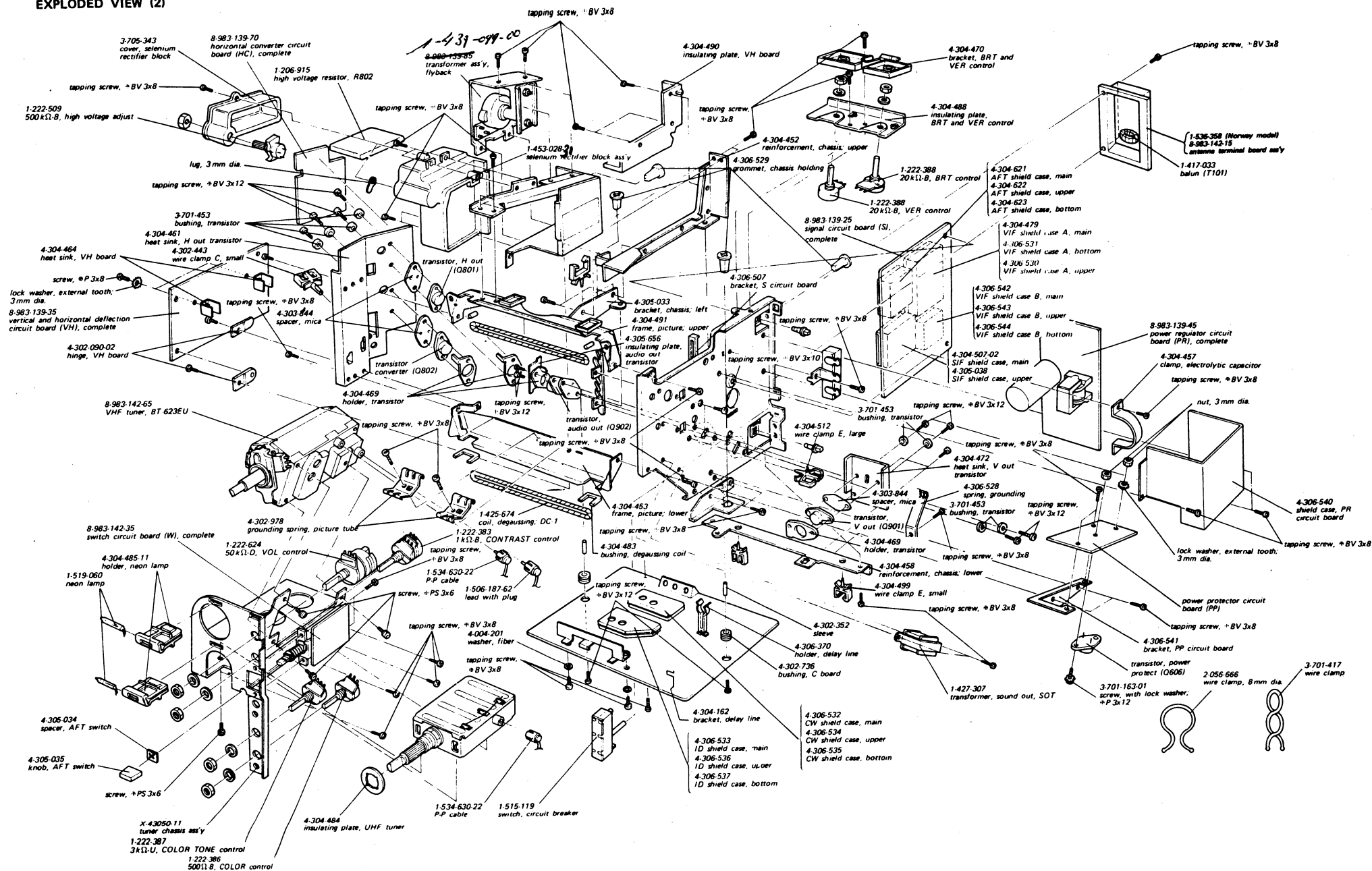
Chassis No. SCC-22A-C





**Note:** ● 1~5: X-43065-01 mask ass'y  
▲ 1~2: X-43065-08-2 rear cover ass'y  
● 1~6: X-43065-02 cabinet ass'y

### EXPLODED VIEW (2)



# ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
<b>TUNERS AND CIRCUIT BOARDS</b>			⇒ Q302	8-729-663-47	2SC1364	⇒ D314-318	8-719-422-21	1T22AM	<b>MISCELLANEOUS</b>		
1-581-599-11	PP Board (power protector), SCC-22A-A/B		Q303-306	8-724-375-01	2SC403C	⇒ D319	8-719-815-55	1S1555	Th201	1-800-071-00	Thermistor, TH-350
1-581-599-12	PP Board (power protector), SCC-22A-C		⇒ Q307-309	8-729-663-47	2SC1364				Th202	1-800-059-00	Thermistor, TH-200
8-983-139-70	HC Board (horizontal converter), complete		Q310	8-724-375-01	2SC403C	⇒ D320-323	8-719-422-21	1T22AM	Th502	1-800-069-00	Thermistor, TH-15000
8-983-139-15	C Board (chroma circuit), complete		⇒ Q311	8-729-612-77	2SA1027R	⇒ D324-327	8-719-815-55	1S1555	Th601	1-800-081-00	Thermistor, 8KD-7
8-983-139-25	S Board (signal circuit), complete		Q312, 313	8-724-375-01	2SC403C	⇒ D328	8-719-422-21	1T22AM			
			⇒ Q314	8-729-663-47	2SC1364	⇒ D501, 502	8-719-422-21	1T22AM			
8-983-139-35	VH Board (vertical horizontal deflection), complete		Q315-317	8-724-375-01	2SC403C	⇒ D503	8-719-305-15	GH3F			
8-983-139-45	PR Board (power regulator), complete		⇒ Q318, 319	8-729-663-47	2SC1364				SR501, 901	1-800-032-00	Varistor, TD-80
8-983-139-55	T Board (socket circuit), complete					⇒ D504	8-719-305-15	GH3F	PR901	1-800-080-00	Thermistor (positive)
8-983-139-85	Transformer Ass'y, flyback (T801)		Q320, 321	8-724-375-01	2SC403C	⇒ D505, 506	8-719-422-21	1T22AM	<b>COIL</b>		
			⇒ Q322-331	8-729-668-47	2SC1364	⇒ D507	8-719-305-15	GH3F	All coils are microinductors unless otherwise noted.		
						⇒ D508	8-719-305-15	GH3F	L151, 152	1-407-165-00	47μH
8-983-142-15	Antenna Terminal Board Ass'y including		⇒ Q501-503	8-729-663-47	2SC1364	⇒ D510	8-719-422-21	1T22AM	L153	1-407-167-00	68μH
1-536-358-00	(1-536-358 : Norway model)		Q504, 505	8-725-412-00	2SC1124				L154	1-409-193-00	Coil, wave trap; 4.43MHz
1-417-033-00	Balun (T101)		⇒ Q506, 507	8-729-663-47	2SC1364	⇒ D511, 512	8-719-815-55	1S1555	L155-157	1-407-158-00	12μH
1-508-492-00	Antenna Socket, UHF		⇒ Q508	8-729-255-12	2SC2551	D601	8-719-302-22	SB-2B	L158	1-407-167-00	68μH
1-508-493-00	Antenna Socket, VHF		Q509	8-725-412-00	2SC1124	⇒ D602	8-719-200-02	10E2			
3-705-455-00	Plate, antenna terminal					⇒ D603	8-719-333-10	UF1C	L201	1-409-214-00	VIFT-T1 40.4MHz
1-581-591-00	Antenna Board		⇒ Q510	8-729-663-47	2SC1364				L202	1-409-215-00	VIFT-T3 31.9MHz
1-417-040-00	Transformer (T102) : Norway model		⇒ Q511	8-729-255-12	2SC2551	⇒ D604-606	8-719-200-02	10E2	L203-206	1-407-184-00	3.3μH
			⇒ Q601	8-729-663-47	2SC1364	⇒ D607	8-719-301-51	S-15H	L207	1-425-504-00	RF Choke
			Q602	8-725-412-00	2SC1124	⇒ D608	8-719-200-00	10E2	L208	1-407-190-00	10μH
8-983-142-25	UHF Tuner, BT-123		⇒ Q603	8-729-663-47	2SC1364	⇒ D609	8-719-930-12	EQB01-12Z			
8-983-142-35	W Board (switch circuit), complete					D613	8-719-200-50	SK-1W50	L209	1-407-171-00	150μH
8-983-142-65	VHF Tuner, BT-623EU		⇒ Q604	8-729-612-77	2SA1027R				L210, 211	1-407-158-00	12μH
			⇒ Q605	8-729-255-12	2SC2551	⇒ D751-758	8-719-422-21	1T22AM (SCC-22A-A/B only)	L212	1-407-168-00	82μH
			⇒ Q606	8-765-132-00	2SC867A	⇒ D801	8-719-305-15	GH3F	L213	1-407-186-00	4.7μH
			⇒ Q751	8-724-375-01	2SC403C	D802	8-719-302-22	SB-2B	L214	1-407-557-00	680μH
					(Chassis No. SCC-22A-A/B)	⇒ D803	8-719-200-02	10E2			
			Q801	8-723-424-16	2SC1034				L291	1-407-166-00	56μH
						DC801	1-453-028-21	Selenium Rectifier Block Ass'y including	L301	1-425-671-00	DAC
⇒ Q151-153	8-729-663-47	2SC1364	Q802	8-728-693-00	2SC1316				L302	1-407-186-00	4.7μH
⇒ Q154, 156,	8-729-322-78	2SC2278	⇒ Q901-903	8-765-132-00	2SC867A				L303	1-407-189-00	8.2μH
⇒ Q158									L304	1-407-557-00	680μH
⇒ Q155, 157,	8-729-612-77	2SA1027R									
⇒ Q159									L305	1-407-177-00	470μH
									L306	1-407-204-21	6.8mH
Q201	8-725-923-00	2SC1129							L307	1-407-166-00	56μH
Q202, 203	8-725-800-00	2SC1128							L308	1-407-159-00	15μH
⇒ Q204-207	8-729-663-47	2SC1364							L309	1-407-166-00	56μH
⇒ Q208, 209	8-729-612-77	2SA1027R									
⇒ Q210	8-729-663-47	2SC1364							L310-312	1-407-177-00	470μH
									L313	1-407-164-00	39μH
⇒ Q211	8-729-612-77	2SA1027R							L314, 315	1-407-595-00	6.8mH
									L320, 321	1-407-186-00	5.6μH
Q301	8-724-375-01	2SC403C							L322	1-407-188-00	6.8μH

## Note:

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

The mark \* indicates the parts which is changed after serial No. 15,001.

Ref. No.	Part No.	Description
L501	1-407-552-00	1.5mH
L502	1-459-075-00	3.3mH, dynamic convergence
L503	1-459-074-00	6.8mH, horizontal centering
L504	1-407-346-00	200μH Choke, spook
L505	1-407-553-00	82μH Choke, spook

L506	1-407-193-21	680μH
L507	1-407-364-00	3.3μH Choke
L508, 509	1-407-190-00	10μH
L515	1-407-364-00	3.3μH
L601-605	1-407-364-00	3.3μH

L606	1-407-190-00	10μH
L607	1-407-178-00	1μH
L610, 611	1-407-364-00	3.3μH
L801-805	1-407-364-00	3.3μH
L904, 905	1-425-674-00	Degauss (DC-1, 2)

L906	1-452-039-21	Beam Alignment Magnet
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DL151	1-415-047-00	Delay Line
DL301	1-415-046-00	Delay Line

*L751	1-407-164-00	39μH (SCC-22A-A/B)
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#### TRANSFORMERS

T201	1-403-728-00	VIFT-1
T202	1-409-217-00	VIFT-T2 33.4MHz
T203	1-403-729-00	VIFT-2
T204	1-403-841-00	VIFT-3
T205	1-403-729-00	VIFT-4

T206	1-409-218-00	VIFT-T4 33.4MHz
T207	1-403-730-00	VIFT-5
T208	1-409-235-00	Coil, wave trap; 5.5MHz
T209	1-403-842-00	SIFT-1
T210	1-403-843-00	SIFT-3

T211	1-403-810-00	AFT T3
T212	1-403-811-00	AFT T4
T301	1-403-844-21	TOT
T302	1-403-845-21	BPT-1
T303	1-425-506-21	BPT-2

T304	1-405-372-21	BAT
T305	1-425-618-21	COT-1

Ref. No.	Part No.	Description
T306	1-403-846-21	BPT-3
T307	1-425-618-21	COT-2
T308	1-403-846-21	BPT-4

T501	1-437-030-00	HDT
T502	1-439-097-00	HOT
T503	1-435-008-00	VBT
*T601	1-421-302-21	LFT
T602	1-437-032-00	CCH

T603	1-437-033-00	CDT
T604	1-441-855-00	HIT
*T751	1-425-618-00	COT-3
T901	1-427-307-00	SOT

#### CAPACITORS

All capacitors are in μF and ceramic unless otherwise noted.  
50WV or less are not indicated except for electrolytics.  
p : μF, elect : electrolytic

C101-104	1-102-238-00	47p
C105-108	1-102-239-00	470p
C111	1-121-257-00	5 15V elect
C259	1-102-043-00	1000p 500V feed through
C513	1-121-246-00	4.7 160V elect

C514	1-102-038-00	0.001 500V
C517	1-102-219-00	680p 1kV
C519	1-108-549-11	0.68 200V mylar
C520	1-121-921-00	10 160V elect
C522	1-121-919-00	47 160V elect
C525	1-101-810-00	100p 500V

C541	1-102-002-00	680p 500V
C549	1-101-810-00	100p 500V
C601	1-115-101-21	0.1 450V oil
C602	1-102-240-00	0.0047 250V
C603	1-123-022-00	22 350V elect

C604	1-125-080-00	220 375V elect
C606	1-121-919-00	47 160V elect
C608	1-121-189-00	1 160V elect
C609	1-108-810-00	100p 500V
C613, 614	1-105-801-13	0.047 400V mylar

C617	1-101-810-00	100p 500V
*C621	1-129-739-00	0.1 630V film (SCC-22A-C)

Ref. No.	Part No.	Description
*C622	1-129-739-00	0.1 630V film
*C623	1-108-745-21	0.22 250V mylar
C630	1-102-085-00	0.0047 500V

C701	1-119-327-00	0.47 500V elect
C702	1-102-050-00	0.01 500V
C801	1-129-864-00	16,000p 1000V film
C802	1-129-859-00	7500p 1500V film
C804	1-102-155-00	330p 2kV

C805	1-102-219-00	680p 1kV
C806	1-102-038-00	0.001 500V
C808, 809	1-102-038-00	0.001 500V
C810	1-102-153-00	100p 2kV
C901	1-105-793-00	0.01 400V mylar

#### RESISTORS

All resistors are in ohms. Common ¼W carbon resistors are omitted.  
Refer to the list on the last page for their part numbers.

All variable and adjustable resistors have characteristic curve B,  
unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ

R170	1-206-104-00	10k 1W metal oxide
R174	1-206-104-00	10k 1W metal oxide
R178	1-206-104-00	10k 1W metal oxide
R260	1-217-027-00	33 3W cement coated
R261	1-217-027-00	47 3W cement coated

R508	1-206-017-00	1.8k 2W metal oxide
R519	1-211-451-00	1k 1/8W carbon
R523	1-202-792-00	22k composition
R524	1-207-903-00	10 fuse
R527	1-206-109-00	27k 1W metal oxide

R529	1-207-241-00	5 fuse
R530	1-207-982-00	2.7 fuse
R549	1-207-471-00	4.7 ½W wire wound
R552	1-202-794-00	33k composition
R566	1-211-932-00	27 1/8W

R573	1-206-080-00	82 1W metal oxide
R574	1-206-688-00	10k 2W metal oxide
R601	1-207-657-00	10 3W wire wound
R603	1-207-657-00	10 3W wire wound
R604	1-206-823-00	33k 5W metal oxide

Ref. No.	Part No.	Description
R608	1-206-483-00	68 2W metal oxide
R616	1-206-741-00	4.7 3W metal oxide
R618	1-206-698-00	27k 2W metal oxide
R620	1-206-700-00	33k 2W metal oxide
R622	1-211-931-00	68 1/8W carbon

R628	1-207-942-00	39 7W wire wound
R701, 702	1-202-581-00	2.2k ½W composition
R703	1-202-627-00	220k ½W composition
R704	1-202-800-00	100k ½W composition
R705	1-202-635-00	390k ½W composition

R706	1-202-581-00	2.2k ½W composition
R707	1-202-603-00	18k ½W composition
R708	1-202-808-00	470k 1W composition

*R803	1-206-918-00	2.7 3W metal film
	1-206-921-00	4.7 3W metal film
	1-206-922-00	5.6 3W metal film
	1-206-925-00	10 3W metal film
*R804	1-206-927-00	15 3W metal film
	1-206-928-00	18 3W metal film
	1-206-929-00	22 3W metal film

R805	1-202-788-00	10k composition
R806	1-217-007-00	1 3W cement coated
R901	1-205-483-00	10 10W cement coated

VR151	1-222-515-00	330, adjustable; B. DRIVE
VR152	1-222-344-00	5k, adjustable; B. BKG
VR153	1-222-515-00	330, adjustable; R. DRIVE
VR154	1-222-344-00	5k, adjustable; R. BKG
VR155	1-222-515-00	330, adjustable; G. DRIVE

VR156	1-222-344-00	5k, adjustable; G. BKG
VR201	1-222-516-00	470, adjustable; AGC
VR202	1-222-516-00	470, adjustable; TRAP
VR203	1-222-517-00	1k, adjustable; IF AGC
VR204	1-222-518-00	4.7k, adjustable; UHF RF AGC

VR301	1-222-515-00	330, adjustable; DL GAIN
VR302	1-222-517-00	1k, adjustable; ACC
VR303	1-222-518-00	4.7, adjustable; COLOR
VR304	1-222-517-00	1k, adjustable; AGC-1
VR305	1-222-517-00	1k, adjustable; AGC-2

VR306	1-222-786-00	22k, adjustable; ID SETTING
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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
VR501	1-222-725-00	20k, adjustable; H. FREQ
VR502	1-223-017-00	50k, adjustable; TILT
VR503	1-223-017-00	50k, adjustable; H. CENT
VR504	1-222-725-00	20k, adjustable; PIN
VR505	1-222-344-00	5k, adjustable; H. SIZE
VR506	1-222-512-00	10k, adjustable; V. SIZE
VR507	1-222-512-00	10k, adjustable; V. LIN
VR508	1-222-784-00	3.3k, adjustable; V. BIAS
VR601	1-222-517-00	1k, adjustable; 110V
VR602	1-222-518-00	4.7k, adjustable; PP
VR701	1-222-809-00	500k, adjustable; SCRN
VR801	1-222-509-00	500k, adjustable; H. STAT
VR901	1-222-383-00	1k, variable; CONTRAST
VR902	1-222-388-00	20k, variable; VER
VR903	1-222-624-00	50k-D, variable; VOL
VR904	1-222-388-00	20k, variable; BRT
VR905	1-222-387-00	3k-U, variable; COLOR TONE
VR906	1-222-386-00	500, variable; COLOR

#### MISCELLANEOUS

DY	1-451-676-11	Deflection Yoke
F601	1-532-203-00	Fuse, 2A
F602	1-532-078-00	Fuse, 1A
S902	1-515-119-00	Switch, circuit breaker
SG701-705	1-519-063-00	Spark Gap 1.5kV
NE901	1-519-060-00	Neon Lamp, POWER
NE902	1-519-060-00	Neon Lamp, UHF
VC201	1-141-138-00	1 - 5pF, trimmer
X301	1-527-183-00	Crystal
	1-452-014-00	Magnet, small disk; 15mm dia.
	1-452-032-00	Magnet, small disk; 10mm dia.
	1-452-038-00	Magnet, vertical convergence
	1-452-054-00	Magnet, rubber ferrite ring
	1-452-058-00	Magnet, horizontal convergence
	1-502-299-00	Speaker
	1-506-187-62	Lead, with plug
	1-514-897-00	Switch, pushbutton; AFT
	1-526-086-00	Socket, picture tube
	1-526-130-61	Cap, anode

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
	1-526-131-52	Cap, convergence
	1-526-144-00	Cap, lead
	1-533-087-00	Holder, fuse
	1-534-587-00	Card, power supply
	1-534-630-22	Cable, p-p
	1-536-296-00	Lug, terminal
	1-536-327-00	Lug 1L1, terminal
	1-543-040-00	Core
	8-735-200-05	Picture Tube, 330AB22

301



— Serial No. 24,701 and later —

## SUPPLEMENT

No. 2  
May 1972

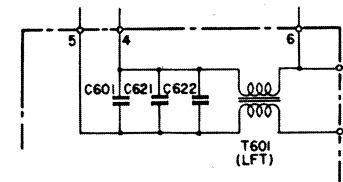
This supplement updates the service manual to include production changes starting with chassis number SCC-22A-A. File this supplement with the service manual.

Subject: 1. Production Change of PP circuit board  
2. ANT circuit board for West Germany model  
3. Change of deflection yoke  
4. Cabinet for West Germany model

## 1. PRODUCTION CHANGE OF PP CIRCUIT BOARD

## 1-1. Netherlands, Sweden, Denmark and Finland Models

Ref. No.	~15,000	15,001~19,000	19,001~21,000	21,001~24,700	24,701 and later
T601(LFT)	○	—	○	○	—
C601	0.1 $\mu$ F/450V	0.1 $\mu$ F/450V	0.1 $\mu$ F/450V	0.22 $\mu$ F/250V	0.22 $\mu$ F/250V
C621	—	0.1 $\mu$ F/630V	—	—	—
C622	—	0.1 $\mu$ F/630V	0.1 $\mu$ F/630V	—	0.1 $\mu$ F/630V

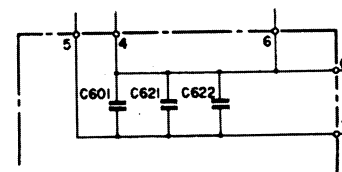


## Note:

- The mark ○ in this list indicates that the component is used and the mark — not used.
- After serial number 24,701, two micro inductors are added. See diagrams on page 2 and 3.

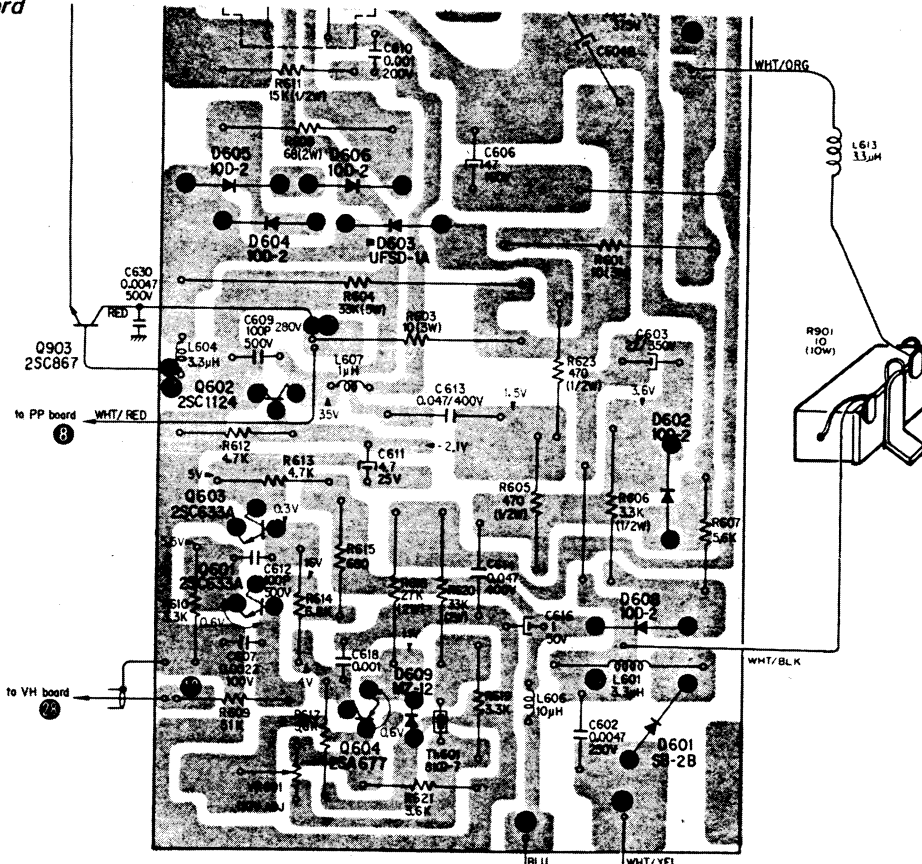
## 1-2. Switzerland Model

Ref. No.	15,001~19,000	19,001~21,000	21,001~24,700	24,701 and later
T601(LFT)	—	—	—	—
C601	0.1 $\mu$ F/450V	—	0.22 $\mu$ F/250V	0.22 $\mu$ F/250V
C621	0.1 $\mu$ F/630V	—	—	—
C622	0.1 $\mu$ F/630V	—	0.1 $\mu$ F/630V	0.1 $\mu$ F/630V



## Note:

- There is no Switzerland model between serial number 19,001 and 21,000.
- The mark — in this list indicates that the component is not used.
- After serial number 24,701, two micro inductors are added. See diagrams on page 2 and 3.



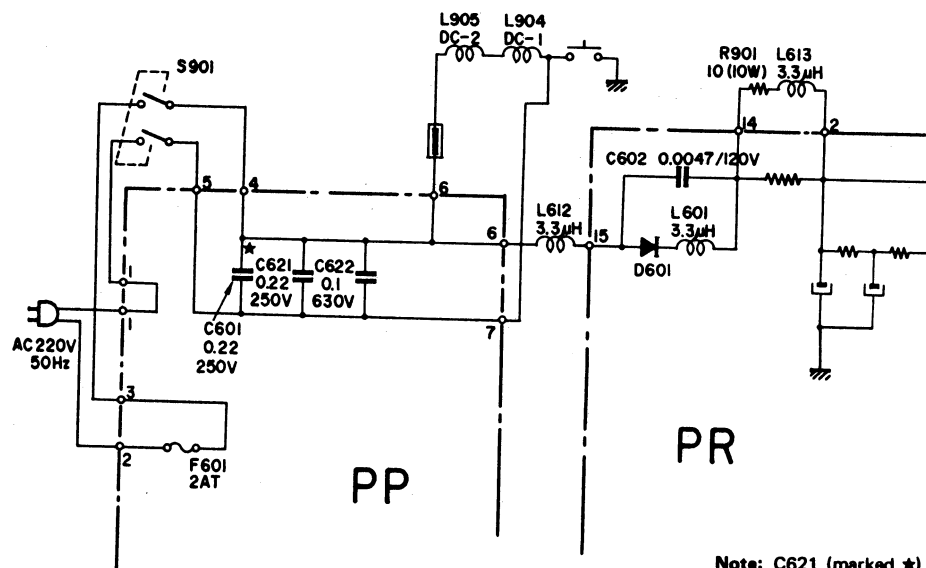


## West Germany Model

The set for West Germany has serial number 24,701 and later.  
See diagrams.

### Partial Schematic Diagram

— Serial No. 24,701 and later —

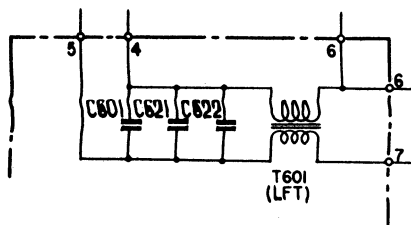


Note: C621 (marked ★) is Norway model only.

C601	1-108-745-21	0.22 ±20%	250WV	mylar
★ C621	1-108-745-21	0.22 ±20%	250WV	mylar
C622	1-129-739-00	0.1 ±10%	630WV	film
L612	1-407-364-21	3.3μH,	micro inductor	
L613	1-407-364-21	3.3μH,	micro inductor	

Norway

Ref. No.	15,001~19,000	19,001~21,000	21,001~24,700	24,701 and later
T601(LFT)	○		○	—
C601	0.22μF/250V		0.22μF/250V	0.22μF/250V
C621	0.1μF/630V		—	0.22μF/250V
C622	0.22μF/250V		0.22μF/250V	0.1μF/630V



Note:

- There is no Norway model between serial number 19,001 and 21,000.
- The mark ○ in this list indicates that the component is used and the mark — not used.
- After serial number 24,701, two micro inductors are added. See diagrams on page 2 and 3.

## ANT CIRCUIT BOARD FOR WEST GERMANY MODEL

ANT circuit board for West Germany model is the same with Norway model. T102 is added on the circuit board. See page 32 of *Service Manual KV-1300E* (Chassis No. SCC-22A-C, Serial No. 15,001 and later).

Parts	West Germany, Norway	Other Countries
ANT circuit board, complete	1-536-358-00	8-983-142-15
T102	1-417-040-00	omitted

## CHANGE OF DEFLECTION YOKE

Deflection yoke is changed after serial number 19,001. Former deflection yoke can be replaced by the new type.

Former	New
1-451-076-11	1-451-091-00

## CABINET FOR WEST GERMANY MODEL

In West Germany model, a new cabinet is used.

Parts	West Germany	Other Countries
Cabinet Ass'y	X-43065-10-0	X-43065-02-0
Rear Cover Ass'y	X-43065-09-0	X-43065-08-2

## SUPPLEMENT

No. 3  
March, 1973

Subject: Electrical and Mechanical Changes

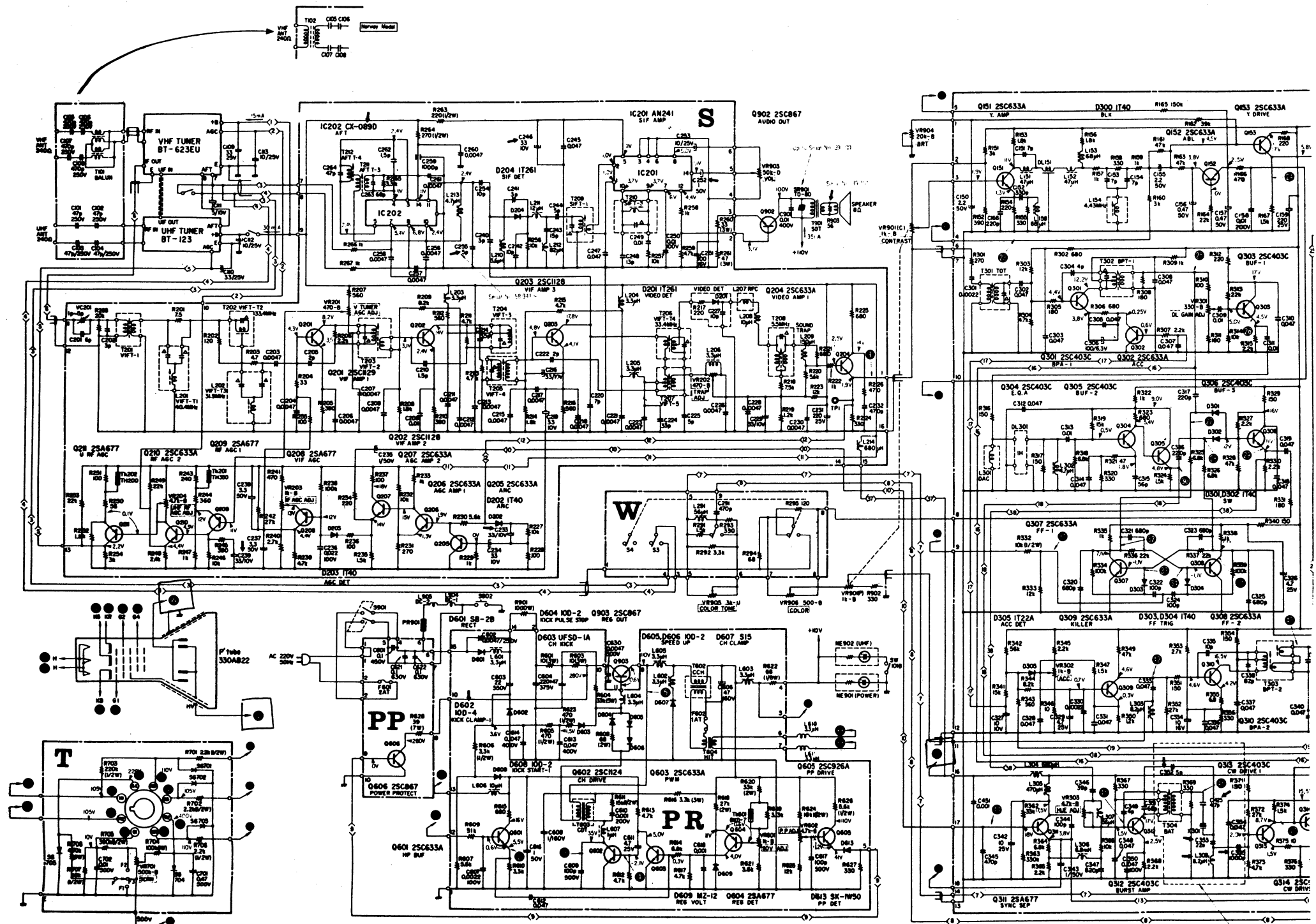
This supplement updates the service manual to include production changes on circuit and mechanical parts.  
File this supplement with the service manual.

## 1. CHANGED PARTS LIST

Ref. No.	Former Part Value	New Part No./ Part Value	Applicable Serial No./ Associated Circuit Board
C559	0.01 $\mu$ F/50V	-----	19,001 ~ , VH board
C570	-----	1-105-741-12 0.001 $\mu$ F $\pm$ 10% 200V mylar	
*R370	270 ohm	-----	19,001 ~ , C board
R384	39k ohm	1-244-709-11 33k ohm	
R527	-----	1-244-701-11 15k ohm	23,501 ~ 62,100, VH board
°R527	27k ohm	1-206-111-11 39k ohm 1W metal oxide	62,101 ~ , VH board
°R575	15k ohm	-----	
R903	-----	1-244-643-11 56 ohm	39,001 ~ , speaker circuit

Ref. No.	Former Part Value	New Part No./ Part Value	Applicable Serial No./ Associated Circuit Board
IC202	M5134P	CX-089D	58,941 ~ , S board
D602	10D-2	10D-4	19,001 ~ , PR board
SR901	TD80	-----	39,000 ~ , Speaker circuit
L210	12 $\mu$ H	1-407-187-00 5.6 $\mu$ H	58,941 ~ , S board
L509	10 $\mu$ H	-----	47,701 ~ , VH board
*L308	15 $\mu$ H	1-407-189-00 8.2 $\mu$ H	19,001 ~ , C board
C233 C239 C246	33 $\mu$ F/16V	1-121-402-11 33 $\mu$ F $\pm$ 18% 10V electrolytic	unknown S board
C252	10 $\mu$ F/25V	1-121-391-11 1 $\mu$ F $\pm$ 18% 50V electrolytic	19,001 ~ , S board
*C352	4pF	1-102-942-11 5pF $\pm$ 0.5pF 50V ceramic	19,001 ~ , C board
*C353	12pF	1-102-959-11 22pF $\pm$ 5% 50V ceramic	
*C355	120pF	1-101-455-11 1000pF $\pm$ 20% 50V ceramic	
C430	0.47 $\mu$ F/50V electrolytic	1-106-753-12 0.01 $\mu$ F $\pm$ 10% 200V mylar	40,501 ~ , C board
*C452	-----	1-101-880-11 47pF $\pm$ 5% 50V ceramic	19,001 ~ , C board

Note: All resistance values are in 5%  $\frac{1}{4}$ W carbon type unless otherwise indicated.  
The parts marked \* or ° should be replaced altogether should replacement of any one of them be required.

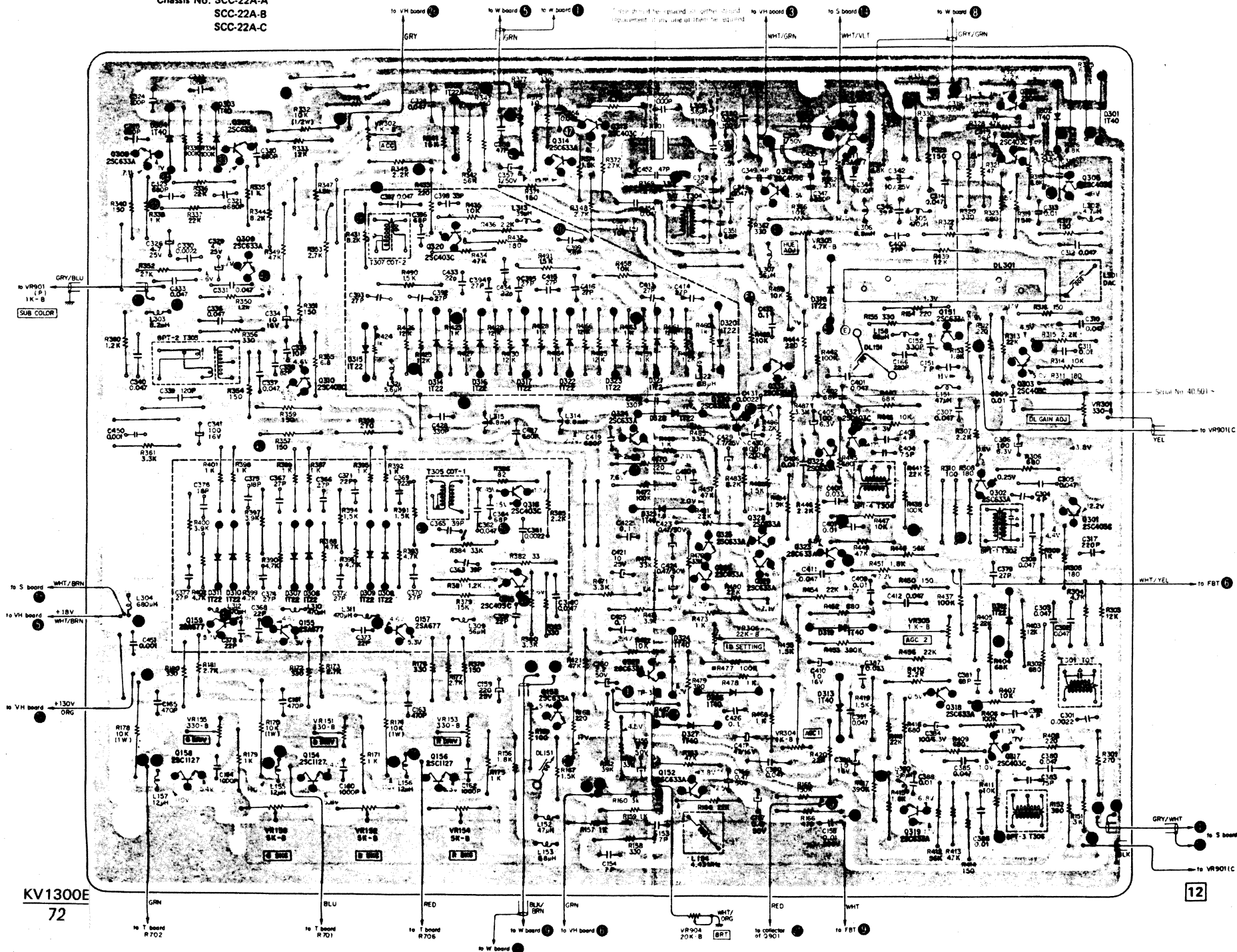


now should be replaced altogether should  
replacement of any one of them be required:



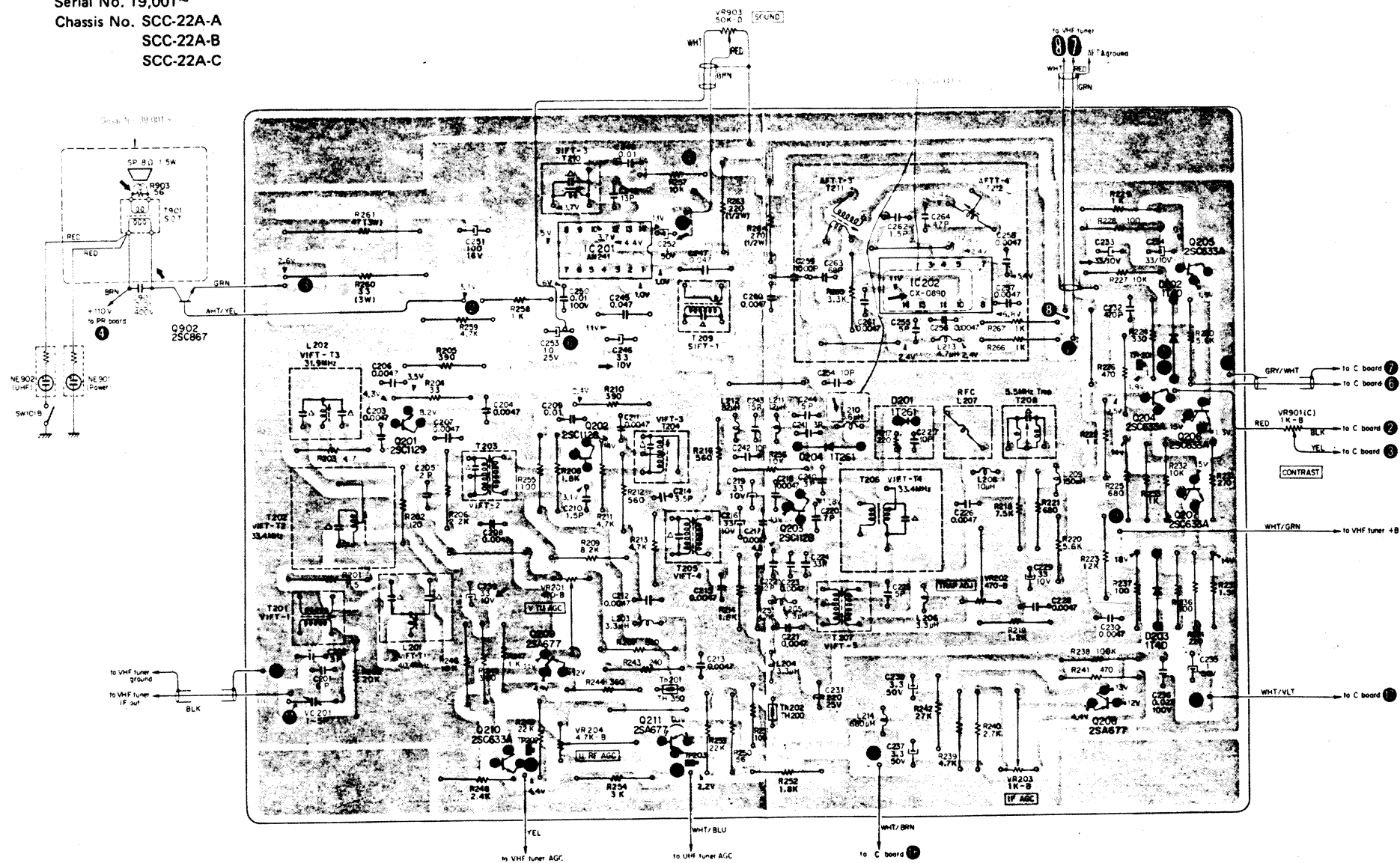
# MOUNTING DIAGRAM - C Board -

Serial No. 19,001~  
Chassis No. SCC-22A-A  
SCC-22A-B  
SCC-22A-C



Parts Location		
Q, IC	D	ADJ.
Q306	D301	
Q313	D305	VR302
Q311	D304	
Q307	D303	
Q314		T304
Q304		T307
Q305		VR303
Q312		
Q320		
Q309		
	D318	L301
Q151	D314	
Q303	D315	T303
Q331	D316	
Q310	D317	
	D322	
	D323	
	D321	
	D320	
Q330	D328	VR301
Q324		
Q321		
Q322		
Q302		T308
Q316		T305
Q301		T302
Q328	D311	
Q325	D310	
Q323	D307	
Q329	D306	
Q326	D309	
Q315	D308	
Q159	D312	
Q155	D319	VR305
Q157		VR306
	D324	
Q327		T301
Q318	D326	
Q153	D313	
	D327	VR155
Q317		VR151
		VR153
Q158		VR156
Q154		VR152
Q152		T306
Q319		L154

Serial No. 19,001~  
Chassis No. SCC-22A-A  
SCC-22A-B  
SCC-22A-C



Parts Location												
Q, IC	<div>Q201</div> <div>IC201</div> <div>Q203</div> <div>IC202</div> <div>Q204</div> <div>Q205</div> <div>Q206</div> <div>Q207</div> <div>Q208</div> <div>Q209</div> <div>Q210</div> <div>Q211</div>											
D	<div>D204</div> <div>D201</div> <div>D202</div> <div>D203</div>											
ADJ.	<div>L202</div> <div>T201</div> <div>T202</div> <div>VC201</div> <div>L201</div> <div>T203</div> <div>T210</div> <div>VR201</div> <div>VR204</div> <div>T204</div> <div>T205</div> <div>T209</div> <div>T211</div> <div>T207</div> <div>T206</div> <div>T212</div> <div>VR202</div> <div>T208</div> <div>VR203</div>											



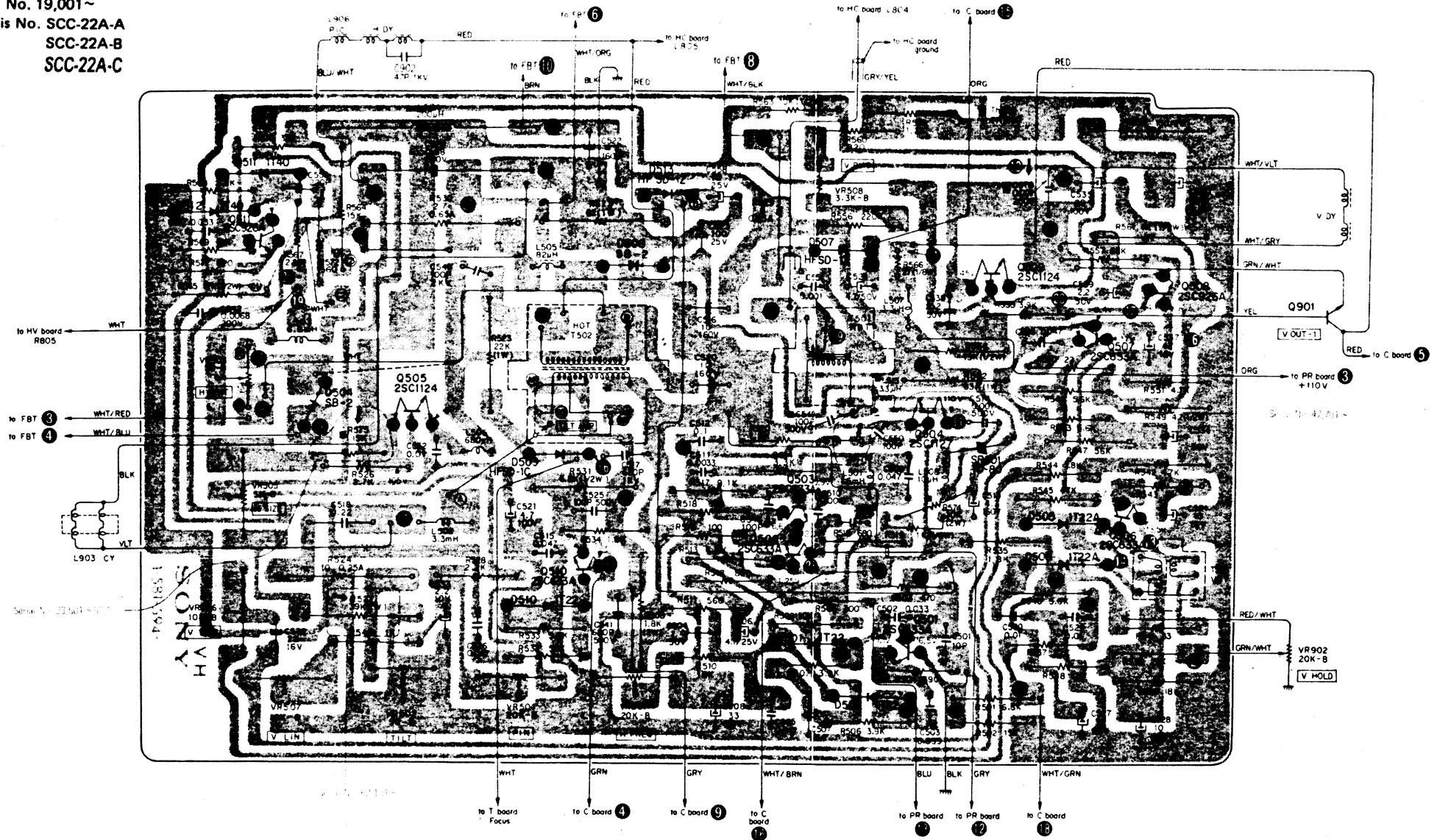
# MOUNTING DIAGRAM - VH Board -

Serial No. 19,001~

Chassis No. SCC-22A-A

SCC-22A-B

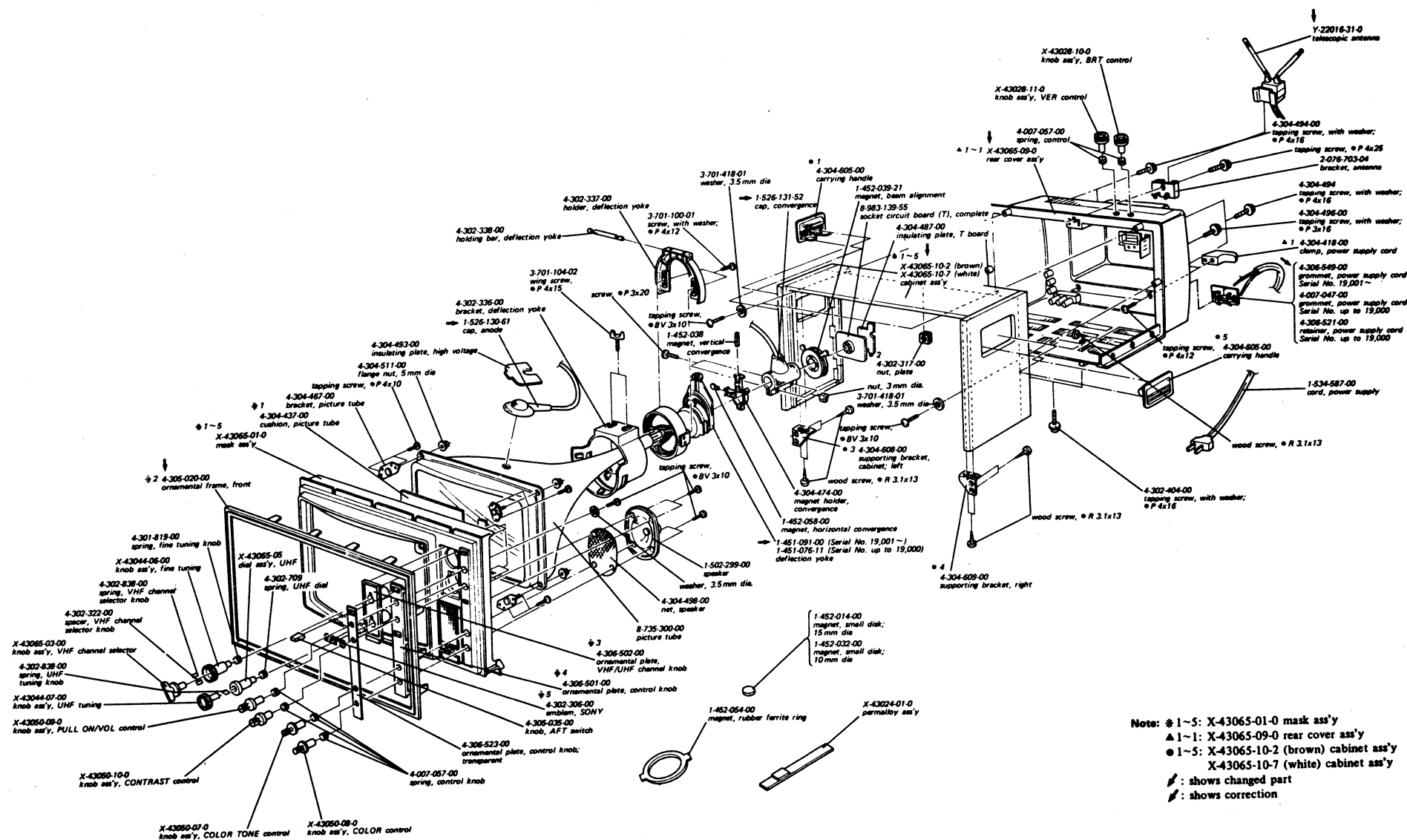
SCC-22A-C



Parts Location

Q	Q511	Q505	Q510	Q503	Q502	Q504	Q509	Q507	Q508
D	D512	D511	D504	D503	D508	D513	D507	D505	D506
ADJ	VR503	VR505	VR506	VR507	VR502	VR504	VR501	VR508	

### EXPLODED VIEWS (1)





# SUPPLEMENT

No. 4  
April 1973

**Subject: Electrical and Mechanical Changes**

This supplement updates the service manual to include production changes covering **Serial No. 69,249 ~ 71,249**.  
File this supplement with the service manual.

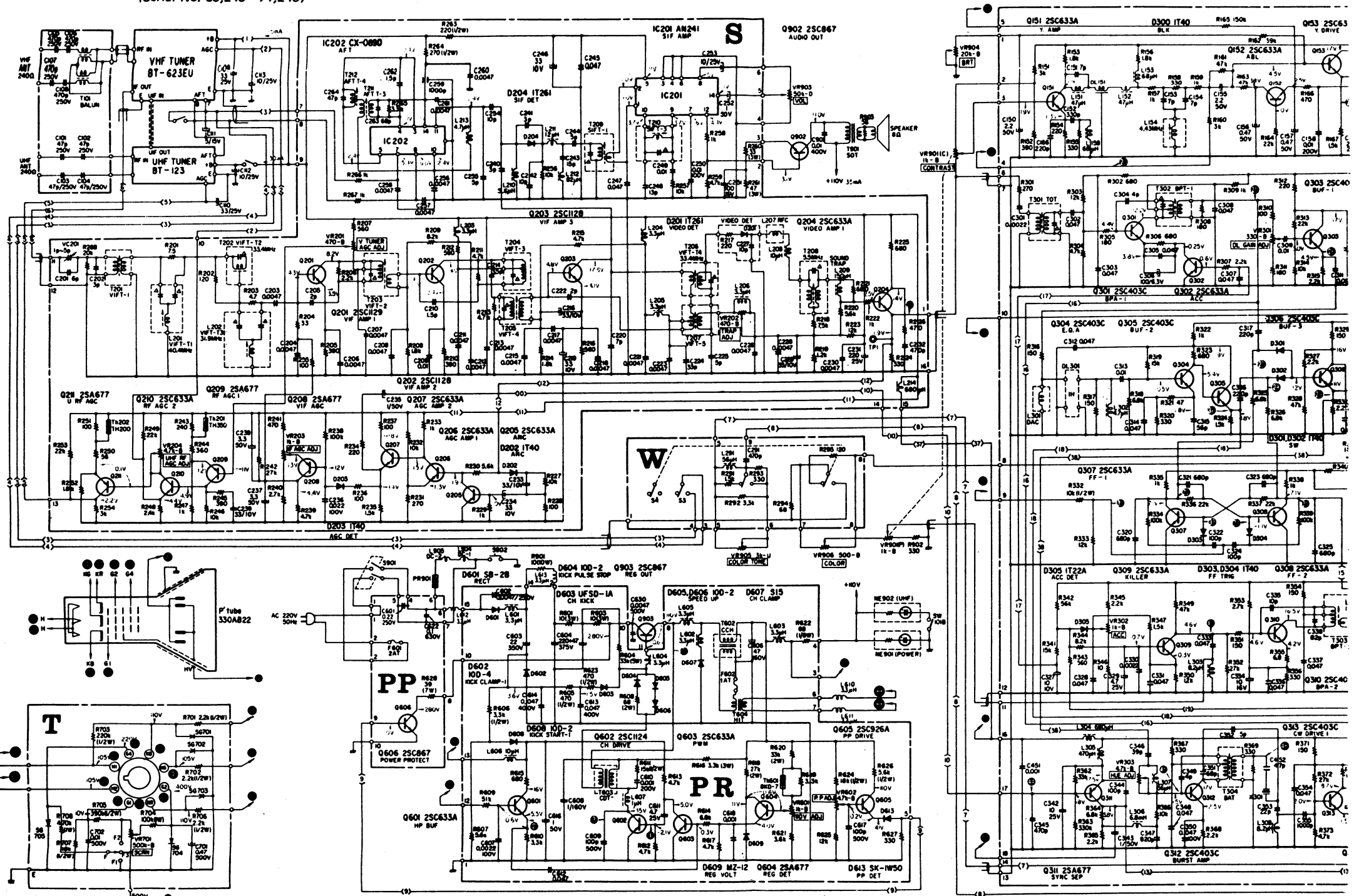
## 1. INTRODUCTION

The VH circuit board and deflection yoke have been changed in addition to some other electrical and mechanical changes.

## 2. CHANGED PARTS LIST

(Serial No. 69,249 ~ 71,249)

<i>Ref. No.</i>	<i>Former Part Value</i>	<i>New Part No./Part Value</i>
VH board	8-983-139-35	8-983-781-15
Q904	-----	2SC867
L907	-----	1-451-096-00 coil, phase adjustment; PAC
T902	-----	1-421-301-00 transformer, pincushion; PCT
C921	-----	1-108-632-11 0.33 $\mu$ F $\pm$ 10% 100V mylar
R921	-----	1-244-673-11 1k $\Omega$ $\pm$ 5% $\frac{1}{4}$ W carbon
R922	-----	1-244-673-11 1k $\Omega$ $\pm$ 5% $\frac{1}{4}$ W carbon
R923	-----	1-244-703-11 18k $\Omega$ $\pm$ 5% $\frac{1}{4}$ W carbon
DY	1-451-076-11	1-451-096-00 deflection yoke



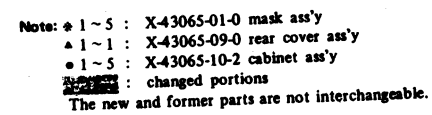
(Serial No. 69,249~71,249)



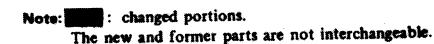
	VER									
Q	<div>Q505</div> <div>Q510</div> <div>Q503 Q502</div> <div>Q504 Q501</div> <div>Q507 Q506</div> <div>Q508</div> <div>Q901 Q904</div>									
D	<div>D512</div> <div>D511</div> <div>D504</div> <div>D503 D510</div> <div>D508</div> <div>D513</div> <div>D507</div> <div>D501</div> <div>D502</div> <div>D505 D506</div>									
ADJ.	<div>VR503</div> <div>VR505</div> <div>VR506</div> <div>VR507</div> <div>VR504</div> <div>VR501</div> <div>VR502</div> <div>VR902</div>									

**Note:** 1. The parts marked ■ are mounted on the conductor side.  
2. / shows the changed portion.

(Serial No. 69,249 ~ 71,249)



(Serial No. 69,249 ~ 71,249)



# NEW VH BOARD PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
SEMICONDUCTORS			CAPACITORS								
Q501	transistor	2SC633A	All the capacitors are in $\mu$ F, 50V and ceramic unless otherwise noted. $p = \mu$ F.			C548	1-102-153-11	100p $\pm 20\%$ 2kV	R533	1-244-691-11	5.6k
Q502	transistor	2SC633A	C501	1-102-947-11	10p $\pm 5\%$	C549	1-101-810-11	100p $\pm 5\%$ 500V	R534	1-244-679-11	1.8k
Q503	transistor	2SC633A	C502	1-108-632-11	0.033 $\pm 10\%$ 100V mylar	C550	1-102-973-11	100p $\pm 5\%$	R535	1-244-679-11	1.8k
Q504	transistor	2SC1127	C503	1-108-632-11	0.033 $\pm 10\%$ 100V mylar	C551	1-102-074-11	0.001 $\pm 10\%$	R536	1-244-705-11	22k
Q505	transistor	2SC1124	C504	1-121-391-11	1 $\pm 10\%$ 50V electrolytic	C552	1-101-004-11	0.01 $\pm 10\%$	R537	1-244-705-11	22k
Q506	transistor	2SC633A	C505	1-108-634-11	0.047 $\pm 10\%$ 100V mylar	C553	-----	-----	R538	1-244-699-11	12k
Q507	transistor	2SC633A	C506	1-121-395-11	4.7 $\pm 10\%$ 25V electrolytic	C554	-----	-----	R539	1-244-703-11	18k
Q508	transistor	2SC1124	C507	1-108-638-11	0.1 $\pm 10\%$ 100V mylar	C555	-----	-----	R540	1-244-691-11	5.6k
Q509	-----	-----	C508	1-121-405-11	33 $\pm 10\%$ 50V electrolytic	C556	1-102-978-11	220p $\pm 5\%$	R541	1-244-637-11	33
Q510	transistor	2SC633A	C509	1-106-212-12	0.047 $\pm 5\%$ 100V mylar	C557	1-108-632-11	0.033 $\pm 10\%$ 100V mylar	R542	1-244-689-11	4.7k
Q511	transistor	2SC926A	C510	1-106-188-12	0.0047 $\pm 5\%$ 100V mylar	C558	1-121-398-11	10 $\pm 10\%$ 25V electrolytic	R543	1-244-625-11	10
D501	diode	1T22	C511	1-106-184-12	0.0033 $\pm 5\%$ 100V mylar	C559	1-101-004-11	0.01 $\pm 10\%$	R544	1-244-679-11	1.8k
D502	diode	1T22	C512	1-108-638-11	0.1 $\pm 10\%$ 100V mylar	C560	1-121-656-11	330 $\pm 10\%$ 50V electrolytic	R545	1-244-713-11	47k
D503	diode	HFSD-1C	C513	1-121-246-11	4.7 $\pm 10\%$ 160V electrolytic	C561	1-105-713-12	0.01 $\pm 10\%$ 100V mylar	R546	1-244-673-11	1k
D504	diode	SB-2	C514	1-102-038-11	0.001 $\pm 10\%$ 500V	C562	1-108-704-11	0.1 $\pm 10\%$ 200V mylar	R547	1-244-715-11	56k
D505	diode	1T22A	C515	1-105-729-13	0.22 $\pm 10\%$ 100V mylar	RESISTORS			R548	1-244-691-11	5.6k
D506	diode	1T22A	C516	1-121-708-11	10 $\pm 10\%$ 160V electrolytic	All the resistors are in ohms, $\pm 5\%$ , $\frac{1}{4}$ W and carbon unless otherwise noted. $k = 1,000$ ohms.			R549	1-207-471-11	4.7 $\frac{1}{4}$ W wirewound
D507	diode	HFSD-1Z	C517	1-102-219-11	680p $\pm 20\%$ 1kV	R501	1-244-693-11	6.8k	R550	1-244-633-11	22
D508	diode	SB-2	C518	1-106-212-12	0.047 $\pm 5\%$ 100V mylar	R502	1-244-701-11	15k	R551	1-244-689-11	4.7k
D509	-----	-----	C519	1-108-549-11	0.68 $\pm 10\%$ 200V mylar	R503	1-244-665-11	470	R552	1-202-794-11	33k 1W composition
D510	diode	1T22	C520	1-121-921-11	10 $\pm 10\%$ 160V electrolytic	R504	1-244-663-11	390	R553	1-244-691-11	5.6k
D511	diode	1T40	C521	1-121-918-11	4.7 $\pm 10\%$ 100V electrolytic	R505	1-244-660-11	300	R554	1-244-899-11	12k $\frac{1}{4}$ W
D512	diode	1T40	C522	1-121-919-11	47 $\pm 10\%$ 160V electrolytic	R506	1-244-687-11	3.9k	R555	1-244-673-11	1k
D513	diode	HFSD-1Z	C523	1-121-416-11	100 $\pm 10\%$ 25V electrolytic	R507	1-244-687-11	3.9k	R556	1-244-717-11	68k
SR501	1-800-032-00	varistor	C524	1-121-396-11	4.7 $\pm 10\%$ 50V electrolytic	R508	1-206-017-11	1.8k 2W metal oxide	R557	1-244-719-11	82k
			C525	1-101-810-11	100p $\pm 5\%$ 500V	R509	1-244-697-11	10k	R558	-----	-----
			C526	1-108-634-11	0.047 $\pm 10\%$ 100V mylar	R510	1-244-703-11	18k	R559	-----	-----
			C527	1-121-405-11	33 $\pm 10\%$ 50V electrolytic	R511	1-244-667-11	560	R560	1-244-657-11	220
			C528	1-121-738-11	10 $\pm 10\%$ 50V electrolytic	R512	1-244-671-11	820	R561	1-244-873-11	1k $\frac{1}{4}$ W
			C529	1-108-626-11	0.01 $\pm 10\%$ 100V mylar	R513	1-244-693-11	6.8k	R562	-----	-----
			C530	1-108-626-11	0.01 $\pm 10\%$ 100V mylar	R514	1-244-685-11	3.3k	R563	1-244-675-11	1.2k
			C531	1-131-158-11	10 $\pm 20\%$ 16V electrolytic	R515	1-244-669-11	680	R564	1-244-899-11	12k $\frac{1}{4}$ W
			C532	1-121-479-11	22 $\pm 10\%$ 16V electrolytic	R516	1-244-649-11	100	R565	1-244-897-11	10k $\frac{1}{4}$ W
			C533	1-127-024-11	2.2 $\pm 20\%$ 10V electrolytic (alox)	R517	1-244-696-11	9.1k	R566	1-211-932-11	27 $\frac{1}{4}$ W
						R518	1-244-669-11	680	R567	1-244-705-11	22k
L501	1-407-552-00	1.5 mH, micro inductor	C534	1-121-391-11	1 $\pm 10\%$ 50V electrolytic	R519	1-211-451-11	1k $\frac{1}{4}$ W	R568	1-244-681-11	2.2k
L502	1-459-059-00	12 mH, dynamic convergence	C535	1-121-917-11	20 $\pm 20\%$ 100V electrolytic	R520	1-244-675-11	1.2k	R569	1-244-697-11	10k
L503	1-459-074-00	6.8 mH, horizontal centering	C536	1-101-006-11	0.047 $\pm 10\%$	R521	-----	-----	R570	1-244-709-11	33k
L504	1-407-346-00	200 $\mu$ H, spook choke	C537	1-121-409-11	47 $\pm 10\%$ 16V electrolytic	R522	-----	-----	R571	1-244-671-11	820
L505	1-407-553-00	82 $\mu$ H, line choke	C538	1-121-450-11	2.2 $\pm 10\%$ 50V electrolytic	R523	1-202-792-11	22k 1W composition	R572	1-244-667-11	560
L506	1-407-193-21	680 $\mu$ H, micro inductor	C539	1-131-158-11	10 $\pm 20\%$ 16V tantalum	R524	1-206-145-11	68 3W metal oxide	R573	1-206-080-11	82 1W metal oxide
L507	1-407-364-00	3.3 $\mu$ H, spook choke	C540	1-121-751-11	330 $\pm 10\%$ 6.3V electrolytic	R525	-----	-----	R574	1-206-688-11	10k 2W metal oxide
L508	1-407-190-00	10 $\mu$ H, micro inductor	C541	1-102-002-11	680p $\pm 10\%$ 500V	R526	1-244-683-11	2.7k	R575	1-244-675-11	1.2k
L509	1-407-190-00	10 $\mu$ H, micro inductor	C542	1-105-751-12	0.0068 $\pm 10\%$ 200V mylar	R527	1-206-110-11	33 1W metal oxide	R576	1-244-641-11	47
L510	1-459-059-00	12 mH, micro inductor	C543	-----	-----	R528	1-244-681-11	2.2k	R577	1-244-709-11	33k $\frac{1}{4}$ W
L515	1-407-364-00	3.3 $\mu$ H, micro inductor	C544	-----	-----	R529	1-207-241-11	5 0.65 A fuse	VR501	1-222-725-00	20k-B, adjustable (H FREQ control)
T501	1-437-030-00	transformer, horizontal drive; HDT	C545	1-102-973-11	100p $\pm 5\%$	R530	1-207-982-11	2.7 0.65 A fuse	VR502	1-223-019-00	300-B, adjustable (TILT control)
T502	1-439-134-00	transformer, horizontal output; HOT	C546	1-102-973-11	100p $\pm 5\%$	R531	1-244-893-11	6.8k $\frac{1}{4}$ W	VR503	1-223-017-00	50-B, adjustable (H CENT control)
T503	1-435-008-00	transformer, vertical blocking; VBT	C547	-----	-----	R532	1-244-715-11	56k	VR504	1-222-725-00	20k-B, adjustable (PIN control)
									VR505	1-222-344-00	5k-B, adjustable (H SIZE control)
									VR506	1-222-512-00	10k-B, adjustable (V SIZE control)
									VR507	1-222-512-00	10k-B, adjustable (V LIN control)